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ST. CLOUD

STATE UNIVERSITY



GRADUATE BULLETIN

1988-89

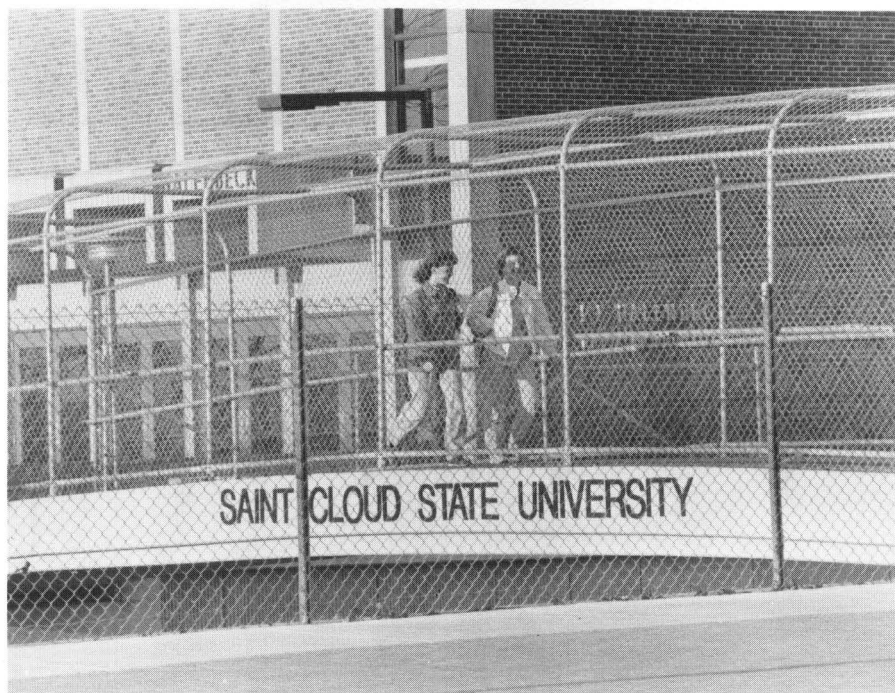
ST. CLOUD

STATE UNIVERSITY

College of Business
College of Education
College of Fine Arts and Humanities
College of Science and Technology
College of Social Sciences

GRADUATE BULLETIN

ST. CLOUD / MINNESOTA 56301



IMPORTANT

Graduate students are expected to become thoroughly familiar with the contents of this *Bulletin* and are to assume responsibility for complying with the provisions that pertain to them. All provisions within this *Bulletin* are subject to change without notice.

LOCATION: Whitney House 202
TELEPHONE: 612-255-2113

OFFICE HOURS: GRADUATE STUDIES

Regular Academic Quarter

8:00 a.m. until 4:30 p.m.

After 4:30—by appointment

Summer Quarter

7:30 a.m. until 4:00 p.m.

Evening Schedule

A representative from the Graduate Studies office will be available at evening registration.

QUARTER OFFERED

Fall

Winter

Spring

Summer

Offered upon sufficient demand

Offered alternate years

F
W
S
SUM

DEMAND
ALT

UNIVERSITY INFORMATION PHONE NUMBERS

Area Code 612

University Switchboard	255-0121
Academic Affairs	255-3143
Admissions	255-2243
Business Office	255-3133
Career Planning/Placement	255-2151
Continuing Studies	255-3081
Financial Aids	255-2047
Graduate Studies	255-2113
Housing Office	255-2166
Public Relations and Publications	255-3151
Records and Registration	255-2111

Wayne Gildseth

Dean, School of Graduate and Continuing Studies

Dennis L. Nunes

Associate Dean, Graduate Studies

KEY TO SYMBOLS

Quarterly course designations are provided to assist in program planning. Courses are scheduled to be offered in the quarter specified; however, circumstances and problems may necessitate change. Consult the current class schedule for further information.

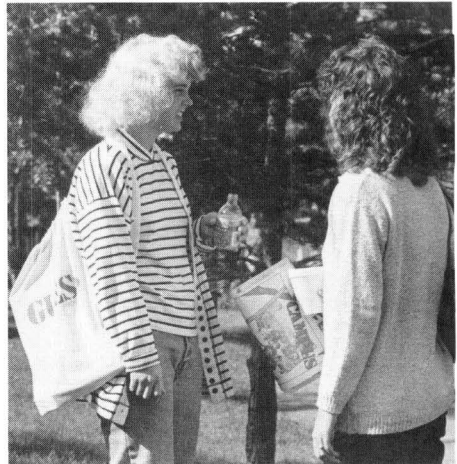
ABBREVIATIONS

Coreq.	Corequisite
Cr.	Credit
Gr.	Graduate
Lab.	Laboratory
Prereq.	Prerequisite
Undgr.	Undergraduate
ACCT	Accounting
AMST	American Studies
ANTH	Anthropology
ART	Art
ASTR	Astronomy
BCIS	Business Computer Information Systems
BEOA	Business Education and Office Administration
BIOL	Biological Sciences
CDIS	Communication Disorders
CFS	Child and Family Studies
CHEM	Chemistry
CJS	Criminal Justice Studies
COMM	Mass Communications
CSCI	Computer Science
ECON	Economics
ED	Education
EDAD	Educational Administration
ENGL	English
ENGR	Engineering Science
ESCI	Earth Sciences
FREN	French
GEOG	Geography
GER	German
GERO	Gerontology
HETS	Health Education and Traffic Safety
HIST	History
HURL	Human Relations
IM	Information Media
IND	Industrial Education
MATH	Mathematics
MGMF	Management and Finance
MKGB	Marketing and General Business
MUS	Music
MUSE	Music Education
MUSM	Music Musicianship
MUSP	Music Performance
PE	Physical Education
PHIL	Philosophy
PHYS	Physics
POL	Political Science
PSY	Psychology
REC	Recreation
RUSS	Russian
SOC	Sociology
SPAN	Spanish
SPC	Speech Communication
SPED	Special Education
SSCI	Social Science
SST	Social Studies
STAT	Statistics
SW	Social Work
TECH	Technology
TH	Theatre

BUILDING KEY

The following abbreviations are used throughout the SCSU campus.

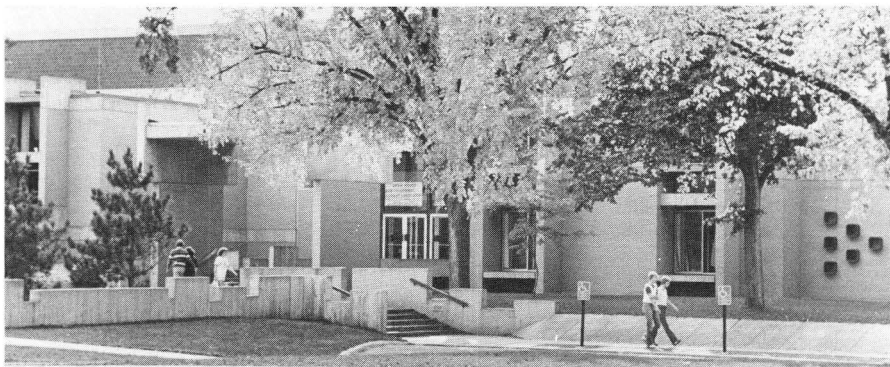
AS	Administrative Services Building
AH	Alumni House
AC	Atwood Memorial Center
BTH	Benton Hall (Women's and Men's Residence)
BH	Brown Hall (Offices and Classrooms)
BB	Business Building
CRH	Carol Hall (Administrative Offices)
CSH	Case Hall (Men's Residence)
CH	Centennial Hall (Learning Resources & Center for Information Media)
EH	Eastman Hall
EB	Education Building
ECC	Engineering and Computing Center
GC	Garvey Commons (Food Services)
HaH	Halenbeck Hall (Physical Education and Health Education)
HH	Headley Hall (Industry and Technology)
HM	Heating and Maintenance Building
HiH	Hill Hall (Women's Residence)
HOH	Holes Hall (Women's and Men's Residence)
KVAC	Kiehle Visual Arts Center
LH	Lawrence Hall (Faculty Offices)
MS	Mathematics and Science Center
MH	Mitchell Hall (Women's Residence)
PA	Performing Arts Center (Music, Speech, Theatre)
R	Riverview Building (English)
SBH	Sherburne Hall (Women's and Men's Residence)
SMH	Shoemaker Hall (Women's and Men's Residence)
STH	Stearns Hall (Women's and Men's Residence)
SH	Stewart Hall (Administration and Classrooms)
WH	Whitney House (Administration)



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ACADEMIC CALENDAR 1987-1989



1987 FALL QUARTER

Tuesday September 8	Faculty workshop and New Student day.
Wednesday September 9	General registration. Evening classes begin.
Thursday September 10	Day classes begin.
Tuesday September 15	Late fee assessed.
Wednesday September 16	Deadline for class changes.
Monday October 12	Columbus Day. (No classes.)
Tuesday October 13	Deadline for graduation applications.
Thursday October 15	Second half of quarter classes begin.
Tuesday November 3	Deadline for dropping classes.
Wednesday November 11	Veteran's Day. Classes in session.
Thursday November 19 -	
Tuesday November 24	Final examinations.
Wednesday November 25	Fall Commencement.

1987-1988 WINTER QUARTER

Monday December 7	General registration. Evening classes begin.
Tuesday December 8	Day classes begin.
Friday December 11	Late fee assessed.
Monday December 14	Deadline for class changes.
Wednesday December 23	Christmas vacation begins 5:00 p.m.
Friday December 25	Christmas Day. Offices closed.
Friday January 1	New Years Day. Offices closed.
Monday January 4	Classes resume.
Monday January 11	Deadline for graduation applications.
Monday January 18	Martin Luther King Day. (No classes.)
Monday January 25	Second half of quarter classes begin.
Tuesday February 9	Deadline for dropping courses.
Monday February 15	Presidents' birthday. Classes in session.
Monday February 29 -	
Thursday March 3	Final examinations.
Friday March 4	Winter Commencement.

1988 SPRING QUARTER

Monday March 14	General registration. Evening classes begin.
Tuesday March 15	Day classes begin.
Friday March 18	Late fee assessed.
Monday March 21	Deadline for class changes.
Monday April 11	Deadline for graduation applications.
Monday April 18	Second half of quarter classes begin.
Tuesday May 3	Deadline for dropping courses.
Monday May 23 -	
Thursday May 26	Final examinations.
Friday May 27	Spring Commencement.

1988 SUMMER QUARTER

First Summer Term

Monday June 13	Classes begin.
Thursday June 16	Deadline for class changes and fee payment. Late fee assessed.
Friday June 24	Deadline for graduation applications.
Monday July 4	Independence day. (No classes; offices closed.)
Monday July 11	Deadline for dropping courses.
Friday July 15	First Summer Term ends at 4:00 p.m.

Second Summer Term

Monday July 18	Classes begin.
Thursday July 21	Deadline for class changes and graduation applications. Late fee assessed.
Monday August 15	Deadline for dropping courses.
Friday August 19	Summer Commencement.

1988 FALL QUARTER

Tuesday September 6	Faculty workshop and New Student day.
Wednesday September 7	General registration. Evening classes begin.
Thursday September 8	Day classes begin.
Tuesday September 13	Late fee assessed.
Wednesday September 14	Deadline for class changes.
Monday October 10	Columbus Day. (No classes.)
Tuesday October 11	Deadline for graduation applications. Second half of quarter classes begin.
Tuesday November 1	Deadline for dropping classes.
Friday November 11	Veteran's Day. Classes in session.
Thursday November 17	
Tuesday November 22	Final examinations.
Wednesday November 23	Fall Commencement.

1988-1989 WINTER QUARTER

Monday December 5	General registration. Evening classes begin.
Tuesday December 6	Day classes begin.
Friday December 9	Late fee assessed.
Monday December 12	Deadline for class changes.
Thursday December 22	Christmas vacation begins 5:00 p.m.
Monday December 26	Christmas Day. Offices closed.
Monday January 2	New Years Day. Offices closed.
Tuesday January 3	Classes resume.
Monday January 9	Deadline for graduation applications.
Monday January 16	Martin Luther King Day. (No classes.)
Thursday January 19	Second half of quarter classes begin.
Tuesday February 7	Deadline for dropping courses.
Monday February 20	Presidents' birthday. Classes in
Monday February 27	
Thursday March 2	Final examinations.
Friday March 3	Winter Commencement.

1989 SPRING QUARTER

Monday March 13	General registration. Evening classes begin.
Tuesday March 14	Day classes begin.
Friday March 17	Late fee assessed.
Monday March 20	Deadline for class changes.
Monday April 10	Deadline for graduation applications.
Monday April 17	Second half of quarter classes begin.
Tuesday May 2	Deadline for dropping courses.
Monday May 22	
Thursday May 25	Final examinations.
Friday May 26	Spring Commencement.



1989 SUMMER QUARTER

First Summer Term

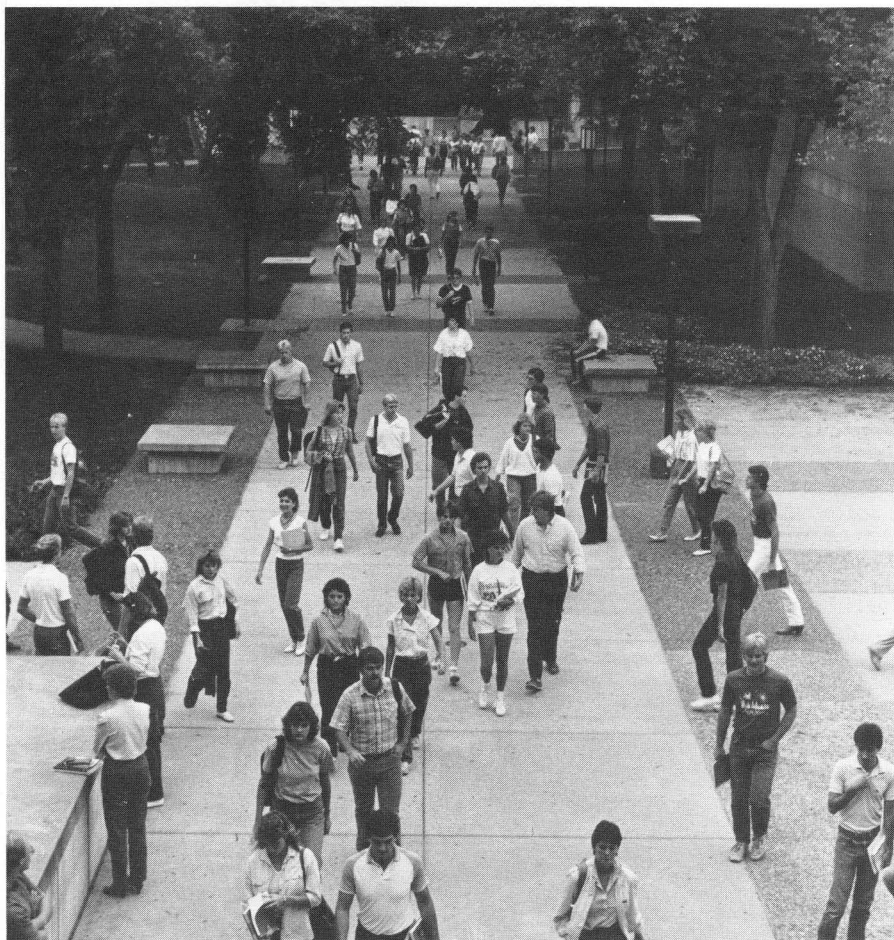
Monday June 12	Classes begin.
Thursday June 15	Deadline for class changes and fee payment. Late fee assessed.
Friday June 23	Deadline for graduation applications.
Tuesday July 4	Independence Day. (No classes; offices closed.)
Monday July 10	Deadline for dropping courses.
Friday July 14	First Summer Term ends at 4:00 p.m.

Second Summer Term

Monday July 17	Classes begin.
Thursday July 20	Deadline for class changes and graduation applications. Late fee assessed.
Monday August 14	Deadline for dropping courses.
Friday August 18	Summer Commencement.

The university calendar is subject to modification or interruption due to occurrences such as fire, flood, labor disputes, interruption of utility services, natural disasters, civil disorder and war. In the event of such occurrences, the university will attempt to accommodate its students. It does not, however, guarantee that courses of instruction, extra-curricular activities or other university programs or events will be completed or rescheduled. Refunds will be made to eligible students in accordance with State University Board policy.

ST. CLOUD STATE UNIVERSITY



HISTORY

The institution which is now St. Cloud State University first opened its doors as the Third State Normal School in September, 1869. The original building was the Stearns House, a hotel purchased by the State Legislature for \$3,000 and remodeled for use as a school. Classrooms were on the first floor, the "model school" was on the second floor, and a women's dormitory was on the third floor. The faculty consisted of Principal Ira Moore and four assistants. The student body included 42 women and 11 men. In the years since this modest beginning, the school has developed into a university of established reputation with 29 buildings and a faculty in excess of 500 members.

This progression from normal school to university follows closely the pattern of de-

velopment of similar state institutions of higher education throughout the nation. Until 1898, St. Cloud Normal School was essentially a secondary school with a few students of college rank. Beginning in 1898, the school began offering a full junior college curriculum. In 1914 the high school portion of the program was dropped. In 1921 the institution was authorized by the State Legislature to adopt the name of St. Cloud State Teachers College.

Granting of the first four-year degree, Bachelor of Education, was authorized in 1925. The name of the degree was changed to Bachelor of Science in 1940. The 1953 Legislature enabled the institution to grant the Master's degree and the 1967 Legislature authorized the Specialist degree.

Although the university has been a teacher preparation institution during most of its

history, students are now enrolled in many other programs available to them. Authorization was obtained in 1946 to grant the Bachelor of Arts degree to students not majoring in education. A two-year associate degree was added in 1948. In recent years the university has added Bachelor of Music and Bachelor of Elective Studies degrees in addition to an External Studies Program.

Today the university is a multi-purpose and comprehensive institution offering a broad range of undergraduate and graduate programs of study in the College of Business, College of Education, College of Fine Arts and Humanities, College of Science and Technology, College of Social Sciences, and the School of Graduate and Continuing Studies.

PHILOSOPHY

St. Cloud State University is committed to the pursuit of excellence in all aspects of higher education within its mission. The university strives to provide an environment which will challenge students to develop their talents, extend their intellectual abilities and interests, stimulate them to expand their creative abilities, and provide the impetus to a life-long respect and enthusiasm for learning. Students are provided the opportunity to develop the knowledge, skills, and attitudes required for entrance into a variety of careers.

The university assists students to develop an appreciation for both continuity and change and to recognize that knowledge serves to identify and preserve past human achievement as well as to provide the foundation for further progress. Students are encouraged and assisted to develop greater self-understanding; to develop respect and concern for individual worth and human dignity; to become more sensitive to the values held by other persons or groups; and to understand and assume their responsibilities to individuals, to society, and to their environment.

In this setting, it is anticipated that these experiences will prepare persons to continue to learn, to appraise their values and the values of society, and to accept their responsibility to participate in the decisions required of citizens in a rapidly changing world.

GOALS

The university will strive to achieve the following goals. Each of these goals is currently being achieved in varying degrees.

- A. The university will provide learning experiences to all persons who can benefit from such experiences in accordance with its firm commitment to equal educational opportunity.
- B. Through the curriculum and supportive educational experiences, the university will

provide students with opportunities to develop an understanding of an appreciation for our rich heritage of human discovery and creativity in the arts, humanities and sciences.

- C. The university will provide selected baccalaureate and graduate programs which will prepare students for a wide variety of careers, as well as provide programs and educational services for those not preparing for a career or not seeking a degree.
- D. Through academic programs and co-curricular activities, the university will provide students with opportunities to develop and improve their abilities to read and listen with understanding, think creatively, communicate effectively, and solve problems imaginatively.
- E. The university will provide a variety of opportunities for the continuing personal development of students in: (1) understanding and relating to others, (2) assessing their strengths and weaknesses, (3) determining their identity and values, and (4) maintaining their physical and mental well-being.
- F. The university will develop appropriate educational programs designed for persons seeking career change or advancement, re-entry into a career field or personal enrichment.
- G. The university will include intercultural and international dimensions in its educational programs to enable students to gain a better understanding of other peoples.
- H. The university will reaffirm its commitment to excellence by: (1) seeking to employ and retain dedicated and professionally outstanding faculty, (2) encouraging faculty to improve and expand their qualifications, (3) maintaining and strengthening standards in teaching and academic achievement.
- I. The university will serve as a community college for the St. Cloud area and will serve as a regional institution by extending its services and programs throughout its service area in response to community needs.

STUDENT RECORDS AND DIRECTORY INFORMATION

Pursuant to the Family Educational Rights and Privacy Act of 1974, students at St. Cloud State University are entitled to review records, files, documents and other materials containing information directly to them which are maintained by the university. In accordance with regulations issued by the Secretary of Health, Education and Welfare, students may request a hearing to challenge the content of education records to insure that the records are not inaccurate, misleading or otherwise in violation of their rights. A student may insert in his or her

records a written explanation respecting the contents of such records if suggested corrections or deletions are not made by the university.

Access and review is subject to the following conditions:

1. The university has 45 days to comply with a student's written request to review his or her records;

2. All information declared confidential by the Act or excluded from the definition of "educational records" in the Act is not available for inspection;

3. After reviewing records, a student may request the unit maintaining the record to remove or modify information the student believes is misleading, inaccurate or inappropriate. If the request is refused, the student may insert in the records a written explanation respecting the contents objected to or the student may file an appeal with the office in charge of the records. This appeal will be heard by a person or committee appointed by the director of the office involved.

The Act further states that certain information can be construed to be directory information which is available to the public. These are the items the university declares to be directory information available to the public: name, address, telephone listing, date of birth, major field of study, class schedule, class status (freshman, sophomore, etc.), participation in officially recognized activities and sports, weights and heights of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended. A student has the right to inform the university that any or all of the above information should not be released without his or her prior consent. Students who wish to restrict the release of this information must complete a written request to that effect at the Records and Registration office. After the required written request has been made, appropriate offices will be notified so that they can begin to comply with the request as soon as possible.

Any information other than the items listed above will not be released by the univer-

sity without the student's specific written permission except as provided by law.

ACCREDITATION AND MEMBERSHIP

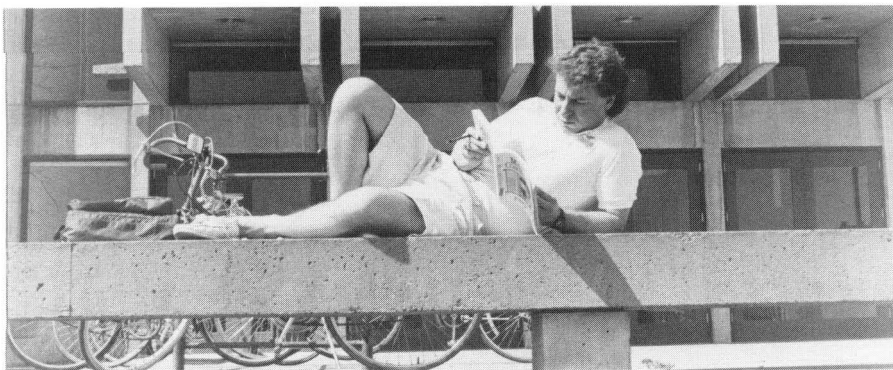
St. Cloud State University is a member of many academic and professional associations, including the North Central Association of Colleges and Schools, American Council on Education, American Association of State Colleges and Universities, American Association of Colleges for Teacher Education and Council of Graduate Schools in the United States. It is accredited by the North Central Association of Colleges and Schools, National Council for Accreditation of Teacher Education, American Assembly of Collegiate Schools of Business, National Association of Schools of Business, National Association of Schools of Music, and the National Association of the Schools of Art.

NON-DISCRIMINATION POLICY

St. Cloud State University (SCSU) acknowledges its legal and moral responsibility to ensure equal employment and educational opportunities without regard to race, creed, color, religion, national origin, sex, age, reliance on public assistance, physical disability, marital status, or inclusion in any group or class against which discrimination is prohibited by state or federal law, including Vietnam era veterans. Furthermore, SCSU will continue to develop and implement timely and comprehensive affirmative action procedures aimed at removing barriers to equal employment opportunity.

EQUAL OPPORTUNITY

St. Cloud State University is an equal opportunity employer. Through an active and continuing affirmative action program, the university provides equal opportunity and treatment in employment, admissions and all academic programs.



GENERAL INFORMATION

GRADUATE TUITION AND FEES*

Tuition for on-campus and off-campus courses:

	Effective Fall 1987	Effective Summer 1988
Regular Year		
Graduate - Resident	\$41.70	\$42.95 per quarter credit
**Graduate - Non-Resident	\$60.20	\$62.00 per quarter credit

FEES*

Student Activity Fees, Student Union Fees and Health Service fees are assessed to students on the basis of \$4.60 per credit hour, with a maximum charge of \$73.60 per quarter. Exceptions: Fees will not be charged for:

1. Off-campus regular courses.
2. Courses numbered 588, 595, or 695 (temporary workshops).
3. Permanent Workshops.
4. Courses numbered 510 (tours).

The Student Activities Committee will consider other requests for exclusion from the fee structure, forwarding recommendations to the President.

NOTE: There is no reduction in tuition or fees for students who audit courses.

NON-PAYMENT OF MONIES DUE THE UNIVERSITY. The student must discharge all financial and other obligations to the university. Students who have financial obligations to the university will not be permitted to register, receive grade reports, or receive or have official transcripts issued until such obligations are satisfactorily discharged.

SENIOR CITIZENS. Minnesota residents 62 years of age or older may enroll in courses at St. Cloud State University without paying tuition or fees, providing space is available after tuition-paying students have enrolled. An administration fee of \$6 per credit hour is required when a course is taken for credit. The student also must bear the cost of laboratory fees, books and materials.

ACADEMIC YEAR

St. Cloud State University operates on the quarter system.

There are two five-week summer terms during the summer quarter, each offering a broad spectrum of the regular academic year courses. Credits earned during the summer terms may be applied toward fulfillment of requirements of graduate programs in the same manner, and are subject to the same regulations, as credits earned during the academic year.

The *Summer Bulletin* may be obtained by writing to the Director of Summer School, Office of Graduate Studies. Other quarterly schedules may be obtained by writing to the Office of Admissions.

EVENING CLASSES

St. Cloud State University offers a number of graduate courses on campus during evenings of the regular school year. These courses may be used to satisfy graduate degree requirements.

Each quarter a listing of on-campus evening courses is published. Copies may be obtained by writing the School of Graduate and Continuing Studies.

PART-TIME EMPLOYMENT

There are many opportunities for students who desire part-time employment. A limited number of these are available on campus. The Office of Financial Aids will assist graduate students who need part-time employment.

Graduate students who carry the full academic load should not plan to devote any time to

*Tuition and fees are subject to change by action of the State University Board.

**Reciprocal agreements regarding in-state tuition fees have been reached with North Dakota, South Dakota and Wisconsin. Residents of those states are eligible to be charged in-state tuition fees at St. Cloud State University provided a reciprocity application is completed and that the application is approved by their home state. Reciprocity applications are available at the Office of Records and Registration and should be completed well in advance of registration.

All students nominated for a graduate assistantship at St. Cloud State University pay in-state graduate tuition fees.

outside employment. In cases where it is necessary to devote time to outside employment, the student's academic load should be reduced accordingly.

A number of assistantships are available. Interested students should contact the chairperson of the major department for further information and details for application requirements. Stipends vary according to percentage of time devoted to the work assignment.

STUDENT LIFE AND DEVELOPMENT

LIVING ACCOMMODATIONS. Graduate students may contact the Housing Office, Carol Hall, St. Cloud, Minnesota 56301 to make application for on-campus housing. A contract and information regarding housing will be sent. Please complete and submit this material to the housing office. A \$25 room reservation deposit should accompany your housing application. Residents pay in advance quarterly for room and board and sign a contract for the entire academic year (exception—Shoemaker Hall is a room only contract with board option available.)

Graduate students recently accepted by the university will receive information from the Housing Office shortly after acceptance. We also assist graduate students in locating suitable off-campus housing. A listing file is maintained in the Housing Office. Students wishing to locate suitable housing in the community are requested to visit our office well in advance of actual need.

RESIDENCE HALL FACILITIES. Most of the residence halls are of recent construction and include features and furnishings designed for comfortable, convenient living in an atmosphere conducive to academic achievement. All halls have areas set aside for study, activities, typing and laundry. The university furnishes the mattress, drapes, wastebasket, study desk, adequate study lighting, room chairs and closet space. Residents provide their own linen, blankets and bedspread for a twin size bed. Linen service may be purchased from a private launderer.

RATES AND AGREEMENTS. Room and board fees in residence halls are approximately \$2,000.00 per academic year for a double room. Charges for room and board are payable in advance by the quarter. Students may pay on a monthly basis if arrangements are made through the Business Office. Information about payment dates is included with each hall assignment.

All residence hall contracts for room and meals are for the full school year. The halls will be closed and no meals will be served during the days between quarters and during university holidays as listed in the graduate and undergraduate *Bulletins*. The reservation fee also serves as a damage deposit fee and is refunded when the student properly checks out of a residence hall. The damage deposit fee must be kept at \$25 while a student is in residence. A \$50 administrative fee will be forfeited unless the student notifies the Housing Office 60 days before fall quarter or 45 days before the beginning of winter or spring quarter of his/her intent to leave the campus.

Room and board charges are subject to change by the action of the State University Board. No discount is made for absences. Room without board is available for summer quarter students at \$125 each per term when two share a room and \$160 for a single room. Meals may be obtained a la carte at Atwood Center.

HANDICAPPED STUDENT SERVICES. Handicapped Student Services is a service designed to assist disabled students with their special problems. Students can receive assistance in typing, test taking, studying, and a variety of other areas. These services will be provided upon request in room 106 of Atwood Center or call 255-3111.

HEALTH SERVICE. Graduate students who pay student activity fees are eligible for the same health service privileges as the undergraduate students. Preventive and remedial health services are provided. These services include physical examinations, communicable disease control measures, some laboratory services, consultation concerning individual health problems, some hospital and medical care, and health education.

CO-CURRICULAR ACTIVITIES. Graduate students are invited to participate in undergraduate activities (including drama, orchestra, band, and vocal music groups) which do not involve intercollegiate competition.

The university has an intramural athletic department that offers all students opportunities to participate in recreational activities of an athletic nature.

The major programming agencies bring to the campus a variety of entertainment furnished by nationally recognized artists representing music, dance, drama, and lecture. The programs are financed by the student activity fee; there is no admission charge to any activity except the performing artists series and major pop concerts.

Opportunities for participation in student activities cover a large area of interest. Graduate students are urged to maintain a well-balanced co-curricular program to supplement their academic endeavors.

St. Cloud State University will not assume a liability for injuries or damage which may be sustained by individuals or their personal equipment while they are participating in any or all phases of the Intramural Program.

GRADUATE STUDY



MISSION

The graduate studies programs at St. Cloud State University have the mission of providing high quality, accessible graduate degree programs that are responsive to the need for professional development and educational enrichment. The programs reflect a wide range of master's programs as well as a selected number of specialist and other post-master's programs that serve students and practitioners throughout the state and upper midwest. The graduate programs should be integrated with the research and development functions of the university.

The goals of graduate study at this university are:

- A. To increase the professional skills and academic competence of students who show promise of making important contributions to their profession.
- B. To prepare students for further graduate study.
- C. To meet the specialized needs of students whose educational or career goals can best be served by programs which provide advanced study in two or more related disciplines.
- D. To foster an attitude of intellectual inquiry and to develop research skills that may be applied in a professional context.

ADMINISTRATION OF THE GRADUATE PROGRAM

Administration of the graduate program is delegated by the president of the university to the graduate dean who meets with the Faculty Association Graduate Council to consider all policy matters affecting the programs of graduate study at St. Cloud State University. The Faculty Association Graduate Council consists of fifteen members elected on a prorated basis by graduate faculty members in the Colleges of Business, Education, Fine Arts and Humanities, Science and Technology, and Social Sciences.

The Faculty Association Graduate Council has the responsibility to discuss and recommend policy changes within the broad context of graduate education.

SUMMARY OF GRADUATE PROGRAMS

St. Cloud State University awards the following graduate degrees: Master of Arts, Master of Business Administration, Master of Science, and the Specialist degree. The Sixth Year Program is available in Educational Administration. The Fifth Year Program in Teacher Education is also offered.

THE MASTER OF ARTS DEGREE (M.A.) offers the candidate the opportunity to specialize in a particular subject matter field. It is open to students with undergraduate liberal arts backgrounds as well as students who have completed teacher education programs. Programs of study leading to the Master of Arts degree have been approved for the following majors: art, biology, English, history, and mathematics. All Master of Arts programs require a thesis, creative work, or starred paper(s). Information concerning the program requirements for a particular major may be found with the course offerings for the department.

THE MASTER OF BUSINESS ADMINISTRATION DEGREE (M.B.A.) program develops professional managers for public and private sectors. It stresses conceptual, analytical and behavioral skills relevant to organization and leadership, provides students the opportunity to develop specialized competencies reflecting individual aptitudes and interests, and explores the relationships between organizations and their environment. A concentration consistent with your particular interest is available in accounting, business computers and information systems, economics, international business, management and finance, marketing, and office administration.

THE MASTER OF SCIENCE DEGREE (M.S.) is designed to provide preparation in a variety of professional fields. Included are programs in accounting, community counseling, rehabilitation counseling, information media, child and family studies, psychology: behavior analysis, special education (TMR only), communication disorders, criminal justice and a wide range of teaching fields. Eligibility for the programs in teacher education is limited to students whose undergraduate preparation qualifies them for teacher licensure.

Child and Family Studies. This program centers around the study of young children in the context of parents and families. Students are provided with course work as well as practical experience with children and families. A pre-kindergarten teaching license is available along with majors in early education, administration, and special needs children. For detailed information see page 52.

Curriculum and Instruction. Programs are available in four tracks: elementary school, middle school/junior high school, senior high school, and reading teacher education. Plans A, B, and C are available in each track. These programs are designed for teachers who are or plan to become career teachers. Special seminars are included. Concentrations in subject matter areas are required in the middle school/junior high and senior high school tracks. For specific program requirements, refer to page 120.

Secondary School Teachers. These programs are designed for teachers who want to pursue specialization in a secondary teaching field. A minimum of an undergraduate minor is required for admission to most of the secondary majors at the graduate level. In some programs an undergraduate major is required for admission. Professional courses in foundations, curriculum, and instruction are part of the program. Specialization is offered in the following areas: art, biology, business education, English, geography, health and physical education, history, industrial education, mathematics, music, and social science. A few of these programs are available under the thesis plan only. For detailed program requirements, consult the course and program listings under the appropriate major department.

Educational Administration. Programs are offered for elementary school principals, secondary school principals, and school business managers. These programs have been approved by the Minnesota State Department of Education. For program requirements, applicants interested in the elementary principalship should consult page 61; those interested in secondary school principalship should refer to page 61; those interested in the school business manager program should refer to page 61.

Minnesota licensure requirements for the principalship include the completing of three years of teaching at the level to be supervised, completion of a master's degree in educational administration or the equivalent and the completion of a Sixth Year program or Specialist degree. Licensure for the superintendency requires a person to hold a license as a principal plus complete requirements for the Sixth Year program or Specialist degree. Students are encouraged to meet the principalship core requirements at the master's degree level and complete superintendency requirements while pursuing the Sixth Year or Specialist.

Information Media. The Master's degree program is available for holders of all baccalaureate degrees. With the current emphasis on all media formats the graduate program in information media has been developed to support persons in educational media, information technologies, and human resources development/training. Encompassed in the information media major are concepts dealing with materials management and message design in both public and private sectors. Information media majors will become qualified for professional positions with library, education, business, government, and health fields. Programs also are available leading to licensure as a media generalist and media supervisor.

Reading Consultants. In addition to background courses, students enrolled in the program for reading consultants are given opportunities to practice in the analysis and correction of reading disabilities under supervised conditions. Successful completion of this program qualifies the person for licensure as a remedial reading teacher, developmental reading teacher, or reading consultant. This program is available on both thesis and non-thesis plans. Detailed program requirements may be found on page 122.

Special Education Personnel. The Department of Special Education offers a program of graduate study which leads to a Master of Science degree. The student may obtain an emphasis in education of the educable mentally handicapped, trainable mentally handicapped, learning disabilities, emotionally disturbed, and the gifted. An early childhood/special needs license is also available in a joint program with Child and Family Studies. These licenses can also be completed as part of the Fifth Year Program. In addition to the Master's degree, the Specialist degree program is available with a major in special education administration. For program requirements, consult page 115.

Psychology: Behavior Analysis. The behavior analysis program is designed to prepare persons who desire advanced academic and professional training in applied behavior analysis, behavior modification, behavior therapy, and behavioral research. Students will have the opportunity to engage in practicum experiences and research in a variety of settings. Program requirements may be found on page 102.

Community Counseling. The community counseling program is designed to prepare counselors to work in a variety of roles in many different human services agencies. The student has the opportunity through consultation with his or her adviser to plan an individualized program of study. Both thesis and non-thesis plans are available. Program requirements may be found on page 105.

Rehabilitation Counseling. The rehabilitation counseling program is designed to prepare counselors to assist disabled individuals to the fullest possible mental, social, physical, vocational, and economic restoration. Thesis and non-thesis plans are available. For more detailed information on the program requirements, consult page 106.

Secondary School Counseling. The secondary school counseling program meets the basic licensure requirements of the Minnesota State Department of Education for counseling in grades 7-12. Formal course work is followed by an on-campus practicum and a field internship in a school setting. Available on Plan A or B. Program requirements may be found on page 106.

Graduate Level Chemical Dependency Certificate. The program offers academic training and an internship experience directed towards developing competencies in the knowledge areas, skills, and abilities necessary to perform the job tasks of a chemical dependency counselor. For more information see page 107.

Speech-Language and Hearing Clinicians. This program offers a combination of course work in the basic areas, seminars, clinical practicum, and research to qualify the graduate for the Certificate of Clinical Competence awarded by the American Speech-Language-Hearing Association. Available on Plan A or B. An outline of the program and descriptions of course offerings can be found on page 56.

SPECIAL STUDIES PROGRAMS (M.A. or M.S.). The master's degree with a major in Special Studies is intended to meet the specialized needs of students whose educational or career goals can best be served by carefully designed programs which provide advanced study in two to three related academic disciplines. To be considered for approval, Special Studies programs must provide a clear focus on a field of study which combines the contributions of these academic disciplines in a multi-disciplinary major.

To request consideration of a Special Studies program, the student must prepare a written

proposal which contains the following elements: proposed title for the multi-disciplinary major, a discussion of the contributions of the disciplines which would comprise the program, a preliminary list of potentially applicable courses, and a summary of the student's educational and career objectives, philosophy and background. Each Special Studies applicant will be interviewed by a four-member committee chaired and appointed by the graduate dean. The committee will review the program proposal and will make a recommendation based upon the appropriateness of the proposal as a field for graduate study, the availability of adequate curricular and other resources to insure a strong program, and the qualifications of the individual applicant.

For further information concerning application procedures and program requirements, contact the graduate dean.

THE SPECIALIST DEGREE is designed to serve a qualitative need for highly trained specialists in various fields. The emphasis in a Specialist degree program is placed on the development of competencies needed for a specific job category. A program for this degree is designed to meet the needs of students in professional areas where a master's degree is not sufficient. The program requires one full year of graduate study beyond a master's degree.

Specialist degree programs are offered by the Center for Information Media, the Center for Educational Administration and Leadership, and the Department of Special Education. The graduate program offered by the Center for Information Media has been developed to support persons in media, library science and audiovisual education for all levels of responsibility. The Specialist degree program offered by the Center for Educational Administration and Leadership is designed for three distinct groups: the elementary school principal, the secondary school principal including the junior high school principal, and the superintendent of schools. The Specialist degree program offered by the Department of Special Education is designed for special education administration. For information regarding specific requirements for the Specialist degree, consult the programmatic section of this bulletin for the major of your interest.

A sixth year program in school administration is also available. For further information, refer to page 66.

FIFTH YEAR PROGRAM IN TEACHER EDUCATION. A planned fifth year program is available for those teachers who do not desire to work for a master's degree or for those who do not otherwise qualify to work for a master's degree. Through careful advising, it is anticipated that the fifth year of work will be integrated with the first four years of the student's preparation. A minimum of 45 credits is required, about one-third of which must be taken at the graduate level. The minimum grade point average required for successful completion of this program is 2.25 (C+). For further details on the Fifth Year program, see page 28.

PROGRAM OPTIONS

Masters: Departments offering the Master's degree may provide one or more of three different options.

Plan A: Under Plan A, a thesis or creative work is required. Plan A requires a minimum of 45 credits including the credits earned for the thesis or creative work. A final oral examination is required, and a final written comprehensive examination also may be required at the option of the department.

Plan B: Under Plan B, a minimum of 48 credits is required. Some departments require one or more starred papers. Students completing Plan B programs without starred papers must complete a final written comprehensive examination. Students completing starred papers are required to complete a final oral examination and, at the option of the department may also be required to complete a final written comprehensive examination.

Plan C: Under Plan C, a minimum of 54 credits is required. Students under Plan C programs must complete a final oral examination focusing on a portfolio of projects and papers which are submitted in accordance with the requirements of the program, and a final written comprehensive examination may also be required at the option of the department. Students are encouraged to engage in a continuing planning process with their adviser to develop an acceptable portfolio of projects for the final oral examination.

Specialist: All Specialist degree programs require a field study. Specialist degree programs require a minimum of 45 credits including the credits awarded for the field study.

Under each of the program options, the departmental requirements may exceed the minimum established as graduate school policy. Please review the departmental requirements and the sections on academic regulations and final evaluation procedure for additional information relating to the program requirements.

ADMISSION PROCEDURES

A student who wishes to pursue a program of graduate study at St. Cloud State University should contact the Graduate Studies office, St. Cloud State University, St. Cloud, Minnesota 56301, for application materials. All application materials should be returned to the Graduate Studies office far enough in advance of the proposed date of registration to allow adequate time for complete processing of the application prior to registration. The following materials are required:

1. Completed "Application for Admission to Advanced Study" accompanied by a \$10 non-refundable matriculation fee made payable to St. Cloud State University.
2. Recommendations. The Graduate Studies office will send the required form to the references listed on the application form.
3. Official transcripts. Two copies of the applicant's official transcripts must be sent directly to the Graduate Studies office by each college or university previously attended. Applicants who apply before receiving the baccalaureate degree will be required to submit supplementary transcripts showing that the degree has been conferred. **Transcripts which the student submits personally are not acceptable.** (Official transcripts, submitted from other institutions, are for use in the applicant's admission process and pursuit of the degree at St. Cloud State University. These transcripts, or copies of them, cannot be issued to the student or other institutions. Graduates of St. Cloud State University are not required to send transcripts of credit earned at this institution.)
4. Entrance test score. Students seeking the Master of Arts degree, Master of Science degree, Sixth Year program, or the Specialist degree are required to take and submit official scores for the *Graduate Record Examination, General Test*. Subject tests are required by some major departments. (See Admissions Test Information, page 18.) Students seeking the Master of Business Administration degree and the Master of Science in Accounting and Business Education and Office Administration must take the Graduate Management Admission Test. Exceptions to this policy are included in the section entitled Admission Test Information.
5. All applicants whose language of origin is not English will be required, as part of the admissions process, to present evidence of their level of English proficiency. For more information about this requirement see Admission Test Information on page 18.

When all these materials are complete, the Graduate Studies office will conduct the initial evaluation. Applicants who satisfy the requirements of the graduate school will be processed to the appropriate graduate department for their recommendation. Students should respond immediately to all departmental correspondence regarding their admission to graduate school. Following receipt of the departmental recommendation, the Graduate Studies office will notify the applicant of the action taken on the graduate application submitted for admission. When an applicant is accepted for graduate study, an adviser will be assigned by the department. The adviser will help the student formulate a plan of study leading to the accomplishment of the student's objectives in pursuing graduate work.

For additional departmental admission information, students should refer to the appropriate departmental requirements and course listings.

ADMISSION POLICY

Admission to Master's Degree Programs. To be considered for admission to a master's degree program an applicant must have been granted a baccalaureate degree from an accredited college or university and have achieved a 2.75 grade point average over the last two years of undergraduate education (6 full quarters or equivalent) OR have achieved an acceptable score on the required entrance examination. All students, however, must furnish a score on the appropriate entrance test required.

Applicants who do not meet the standard admission requirements may be permitted to demonstrate their scholarship and qualify for acceptance by completing a limited program of graduate course work. Further information pertaining to this alternative may be obtained from the graduate dean.

Higher standards for admission to the degree program may be established by a department.

Applicants who hold a baccalaureate degree from an unaccredited college or university may be considered for acceptance to a master's degree program. A careful examination of the applicant's previous record and the entrance examination scores will be used as the basis for recommendation for admission. (Applicants who are admitted under these conditions will be re-evaluated upon completion of 12 graduate credits earned at St. Cloud State University.)

Admission to Double Major; Second Major; Major Equivalent.

These terms are defined as follows:

DOUBLE MAJOR. This term applies to the completion of two majors earned within one degree program.

SECOND MAJOR. This term applies to students whose graduate degree was earned through St. Cloud State University and who subsequently elect to complete another major.

MAJOR EQUIVALENT. This term applies to students whose graduate degree was earned through another institution, but who elect to complete a second major through St. Cloud State University.

Students who wish to complete a major in a second field may do so by satisfying the following requirements:

1. The student must be fully accepted for graduate study by the department and the Graduate Office.
2. The student must submit an Approved Program of study which meets all of the requirements of the degree program. Courses taken as a part of the first degree may be applied to these requirements. However, not less than 15 additional (new) credits must be earned at St. Cloud State University. The program must be completed with a satisfactory grade point average as defined in the Graduate Regulations.
3. The student must satisfactorily complete a final written/oral in the major field in which the double major, second major, or major equivalent is being pursued.
4. The student must satisfy all other requirements as specified at the time of acceptance into the program, or as described in the Graduate Regulations.

Admission to Specialist Degree Programs. To be considered for admission to a specialist degree, an applicant must have been granted a master's degree in the appropriate field from an accredited college or university. Test scores on the Graduate Record Examination General section are required. Two official transcripts of the applicant's undergraduate and graduate education should be sent directly from the granting institution to the Graduate Studies office.

Specific grade point averages covering the master's degree program have been established for admission by each academic department which offers the Specialist degree program. See the program description under the appropriate departmental listings for the specific requirements.

Students holding a specialist or higher degree will complete a *minimum* of 24 credits, including field study, for the specialist equivalent.

Admission to the Sixth Year Program. The Sixth Year program is available only in educational administration. Admission to the program requires completion of a master's degree in educational administration or the equivalent with a grade point average of 3.00. The Graduate Record Examination General Test is required. Two copies of both the undergraduate and graduate transcripts should be sent directly from the granting institution to the Graduate Studies office.

Students holding a specialist or higher degree will complete a *minimum* of 24 credits, including the final comprehensive examination for the sixth year equivalent.

ADMISSION TEST INFORMATION

All applicants for admission to a graduate degree program are required to take the appropriate admission examination.

The Graduate Management Admission Test (GMAT) is required for admission to the Master of Business Administration program and the Master of Science programs in Accounting and Business Education and Office Administration.

The Graduate Record Examination (GRE) is required for all other Master of Arts, Master of Science, Specialist degree and Sixth Year programs. The history major requires the Graduate Record Examination Subject Test.

Acceptance of Graduate Record Examination scores more than five years old will be reviewed by the graduate dean and the department chairperson.

Substitution of the Miller Analogies Test for the Graduate Record Examination is subject to approval of the graduate dean. Approval of the department chairperson is also needed when an Subject Test section of the Graduate Record Examination is required. Substitutions may be given for applicants who hold an advanced degree from an accredited graduate institution or under other exceptional circumstances.

These tests should be taken at least three months prior to the date the student intends to begin classes. Pre-registration directly with the Educational Testing Service is required several weeks in advance of test administration dates. Detailed information regarding the test and registration forms may be obtained from the Graduate Studies office or from the Educational Testing Service at the following addresses.

GMAT

Graduate Management Admission Test
Educational Testing Service
CN 6103
Princeton, NJ 08541-6103
Telephone: 609-771-7330

GRE

Graduate Record Examination
Educational Testing Service
CN 6000
Princeton, NJ 08541-6000
Telephone: 609-771-7670

TOEFL: Foreign Students. All applicants whose language of origin is other than English must take the Test of English as a Foreign Language and request that the score be sent to the Graduate Studies office. This score is submitted as evidence of the applicant's ability to utilize English as a language of instruction. Under normal circumstances a score of 550 on the TOEFL (80 on the Michigan Placement Test) is required for admission to a graduate degree program. Course grades in English at other American universities or schools of intensive English do not constitute proof of English proficiency. Admission to the University does not preclude the University from requiring non-native speakers of English to do more course work in English as a foreign language.

The test of English as a Foreign Language does not replace the Graduate Record Examination or the Graduate Management Admission Test entrance tests. The TOEFL is required of all foreign students in addition to the GRE or GMAT. When requesting information which pertains to the TOEFL, write directly to: TOEFL Services, Educational Testing Service, CN 6151, Princeton, New Jersey, USA 08541-6151; telephone: 609-882-6601.

Foreign students are required to follow the same procedures for entrance into graduate school as all other applicants. For entrance and admission requirements to a master's degree program at this university, please read pages 17 and 18 of this bulletin.

Post Admissions Process: All new students whose language of origin is not English are required to take an English Placement Test. The test results will be available to their academic advisers so that the individual student's language ability can be considered when academic schedules are made out. If the test score is low, the student may be required to take a course in English as a Second Language, or attend the Tutorial Center.

REGISTRATION

Registration procedures are established by the Office of Records and Registration and published with the quarter or summer schedules.

Students intending to pursue course work toward a graduate degree who have not completed all admission requirements and who have not been formally accepted into a degree program must register as special students subject to all regulations of that category.

Special Student. This is a classification for those students who do not intend to pursue a graduate program at this institution or who wish to register for course work prior to their formal acceptance into a graduate program. A maximum of 9 credits earned as a special student or the credits completed in the first quarter of registration (whichever is greater) may be applied to a graduate degree program. Credit may be applicable to a degree program by meeting all requirements for admission to graduate study and submitting a petition to the Graduate office. A special student will be admitted to classes only after degree students have been accommodated.

Only students who have completed a baccalaureate degree may register for graduate-numbered courses (500-600) as a special student. Special students are considered to be pursuing post-graduate study and are not classified as graduate students. However, all special students who register for graduate credit are subject to the academic regulations and policies contained in the *Graduate Bulletin*.

Registration by Undergraduate Students. Undergraduate students who are in their last quarter and who have 12 quarter hours or less to complete for graduation from this university, may petition to enroll in graduate courses (500 level only) not to exceed the normal load. Courses open only to graduate students are numbered 600-699. (Petition forms are available in the Graduate Office.) Approval of the petition will be based on the potential admissibility of the student to the graduate program. The maximum load permitted is 16 quarter hours of undergraduate and graduate credit combined. **Graduate courses completed prior to receiving the undergraduate degree cannot be used toward the undergraduate degree.**

PROGRAM APPROVAL

Program approval is required for all master's and specialist degree candidates. Students are required to develop a program of studies which must be approved by the student's adviser and the graduate dean. Those students writing a thesis or field study must schedule a preliminary thesis or field study conference to obtain approval of the preliminary research outline.

Program approval may take place at any time after the student has been admitted to a graduate program, but prior to the completion of 24 credits applicable to the graduate program (including transfer credits). Each student must contact the Graduate Studies office to request the program forms.

To be eligible, the student must have:

1. Satisfied all conditions attached to admission.
2. Satisfactorily completed the departmental examination(s). (Contact adviser of the Graduate Studies office to determine if required.)
3. Maintain a 3.0 grade point average in the major field, the total program and all graduate course work taken at this university.

The Graduate Studies office will review the student's record to determine eligibility for an approved program according to the criteria listed above, and notify the adviser of the student's status.

The student should develop a proposed program of course work in consultation with the assigned adviser, according to procedures established by the major department. The student should review the program requirements outlined in this bulletin. Upon being approved, all three copies of the program should be returned to the Graduate Studies office by the adviser.

The Dean, School of Graduate and Continuing Studies, will review the proposed program and give final approval. In cases where changes are required, before final approval is given, the Dean will consult with the adviser and the student.

Once the program has been approved, any deviation from it must receive prior approval of the adviser and the graduate dean through the petition process. These petitions for change are available in the Graduate Studies office and must be submitted via the adviser to the Graduate Studies office. When the program is given final approval, the student will receive notification that it meets the requirements for the Master's or Specialist degree program.

FIELD STUDIES, THESES, CREATIVE WORKS, AND STARRED PAPERS

PRELIMINARY THESIS OR FIELD STUDY CONFERENCE. Students on Plan A (thesis) or the Specialist degree program must arrange for a preliminary thesis or field study conference. This conference may be scheduled at any time after the student has been fully accepted into a graduate program and after the student's program of study has been approved by the graduate dean, but at least one quarter prior to the *final oral examination*. In consultation with the student's adviser, an outline of the proposed thesis or field study shall be prepared and four copies submitted to the Graduate Studies office two weeks prior to the time requested for the research conference. The student should then request the Graduate Studies office to schedule a preliminary thesis or field study conference. The student's adviser, one other graduate faculty member from the major department, and one graduate faculty member from a related field (selected by the graduate dean) shall comprise the faculty representation. These conferences are not held during final examination week.

PREPARATION OF THESIS OR FIELD STUDY. The following procedures and regulations govern the preparation of a thesis or a field study:

1. A master's thesis or a field study for the Specialist degree shall be carried out under the supervision of the research committee, appointed at the preliminary research conference, and consisting of the student's adviser, a graduate faculty member from the major department, and another graduate faculty member from a related department (approved by the graduate dean) chosen on the basis of his/her potential advisory value in the area of the research undertaken. This committee shall comprise the membership of the student's final evaluation committee.
2. Registration for a master's thesis or field study is completed in the same manner as all other course work; however, the credits for thesis or field study may be spread over more than one registration period. The student will be required to have an arranged course form signed by his/her adviser when he/she comes to register for the course. These can be obtained through the Records and Registration office. Consult the department program requirements and course lists for the correct course number and credits.

3. The satisfactory completion of the research will be reported as "S" (satisfactory). If all requirements for the research have not been met by the end of the quarter or term in which it was registered, the work will be reported as "in progress." A master's thesis must be completed within the 7-year time limit set for the completion of a master's degree. A field study must be completed within the 7-year time limit set for the completion of a specialist degree.
4. Four copies of the thesis or field study, each containing an abstract, shall be filed with the Graduate Studies office no later than three weeks before the completion of work for the appropriate degree. Before the material is submitted, it must have the approval of the respective committee. When the final evaluation committee has approved the research in its final form, four copies shall be submitted to the Graduate Studies office for binding. An additional thesis or field study is required if the student wants a personal copy. All copies shall be bound in black buckram covers, and the title shall be printed in gold lettering on the front cover and binding edge.
5. Three additional copies of the abstract of not more than 400 words shall be submitted to the Graduate Studies office; the abstract shall include the signature of the chairperson indicating approval before it is submitted to the Graduate Studies office. All abstracts are reprinted and submitted for publication, and therefore, must follow the format of St. Cloud State University which is illustrated in *A Manual for the Preparation of Field Studies, Theses, Creative Works, or Starred Paper(s)*.
6. The student should contact the Graduate Studies office to obtain *A Manual for the Preparation of Field Studies, Theses, Creative Works, or Starred Paper(s)*. This manual provides detailed information and instructions.
7. Standards for the preparation of field studies (for the Specialist degree), theses, creative works, and starred paper(s) are those published by the Graduate Studies office, *A Manual for the Preparation of Field Studies, Theses, Creative Works, or Starred Paper(s)*, and those embodied in *Form and Style in Thesis Writing* authored by William G. Campbell, Stephen V. Ballou, and Carole Slade and published by Houghton Mifflin, unless otherwise specified by the department and approved by the Graduate Studies office. When a conflict exists in standards, format, or style, the manual published by the Graduate Studies office will take precedence over any other manual approved for department use.

CREATIVE WORK—Statement of Qualifications. A student interested in completing creative work (in lieu of the traditional master's degree thesis or as may be required by a specific department) must show evidence of creative ability before being accepted as a candidate for the advanced degree. This evidence submitted by the students from the departments of art, English, and music (creative projects, play-writing, performance or production, etc.) must be presented to a designated committee for critical review and approval. Four copies of the creative work shall be filed with the Graduate Studies office at least two weeks prior to the date set for the *final oral examination*. An additional copy of the creative work is required if the student wants a personal copy.

The creative work includes a written statement of artistic intent and such supporting materials as are applicable. Other than form and style of the text, the binding of the contents of the creative work shall be in accordance with standard thesis requirements.

The statement of artistic intent may contain such information as a description of the work undertaken, the technique(s) involved in the work, and related subject matter. This information and data shall be approved, bound, and placed on file as described in *A Manual for the Preparation of Field Studies, Theses, Creative Works, or Starred Paper(s)* which is available in the Graduate Studies office.

In certain areas of the fine arts, a student may be required to produce evidence of creative skill by submitting critical reviews, letters of recommendation, and/or demonstration(s). For further information, contact the appropriate department chairperson.

Preliminary Conference. A preliminary conference may be scheduled at any time after the student has been fully accepted into a graduate program and after the student's program of study has been approved by the graduate dean, but at least one quarter prior to the final oral examination. The purpose of the conference is to serve as an evaluation of the creative work accomplished prior to the time of the conference and to provide direction for the final creative work.

In consultation with the student's adviser, an outline of the proposed creative work shall be prepared and four copies submitted to the Graduate office two weeks prior to the time requested for the qualifying conference. The student should then request the Graduate office to schedule a qualifying conference. The student's adviser, one other graduate faculty member from the major department, and one graduate faculty member from a related field (approved by the graduate

dean) shall comprise the faculty representation on the committee. Qualifying conferences are not scheduled during final examination week.

The qualifying conference and the final oral examination cannot be held during the same quarter.

Registration for Creative Work. Registration for a creative work (698) will take place in the same manner as for all other course work. These credits, however, may be earned over more than one registration period. (For grading information on creative works, see MARKS on page 29.

STARRED PAPERS. Certain Plan B programs require that starred paper(s) be written in conjunction with approved graduate courses in the student's major area of concentration. These courses must be identified on the approved program forms.

Preliminary Starred Paper Conference. Students pursuing a Plan B program which requires starred papers must arrange for a preliminary starred paper conference. This conference may be scheduled at any time after the student has been fully accepted into a graduate program and after the student's program of study has been approved by the graduate dean, but at least one quarter prior to the *final oral examination*. In consultation with the adviser, the student should prepare a preliminary outline of the proposed research papers, and should submit four copies to the Graduate Studies office at least two weeks prior to the preliminary starred paper conference. At that time, the student should request the Graduate Studies office to schedule the preliminary starred paper conference. The student's adviser, one other graduate faculty member from the major department, and one graduate faculty member from a related field shall be selected by the graduate dean and shall comprise the faculty representation. Preliminary starred paper conferences will not be scheduled during the final examination week.

PLAN C, PROJECT/PORTFOLIO. Plan C programs require that a significant professional project or a portfolio of projects be prepared in conjunction with approved graduate courses in the student's major area of concentration.

Preliminary Project/Portfolio Conference. Students pursuing the Plan C Project/Portfolio should arrange for a preliminary conference with their graduate committee. This conference may be scheduled at any time after the student has been fully accepted into a graduate program and after the student's program of study has been approved by the graduate dean, but at least one quarter prior to the final oral examination. In consultation with the adviser, the student should prepare a summary of the proposed project or portfolio of projects, and should submit four copies to the Graduate Studies office at least two weeks prior to the date of the conference. At that time, the student should request the Graduate Studies office to schedule the preliminary project/portfolio conference. The student's adviser, one other graduate faculty member from the major department and one graduate faculty member from a related field selected by the graduate dean shall comprise the faculty representation. A preliminary project/portfolio conference will not be scheduled during the final examination week. A preliminary conference cannot be held in the same quarter as the final oral examination.

FINAL EVALUATION PROCEDURE

A candidate for the Master's and the Specialist degree shall complete the final evaluation during the last quarter of the graduate program. Students who have earned less than a 3.0 (B) average in the major, over their entire program, and in all graduate credits earned shall not be permitted to complete the final examination.

The final evaluation procedures vary according to the program option selected.

Plan A: A student selecting Plan A must complete a thesis or creative work and must complete a final oral examination. A final written examination may also be required at the option of the department. For further information about these examinations, consult the sections titled *final oral examination* and *final written examination* which follow.

Plan B: Plan B programs are of two types:

Programs which require starred papers

Students completing starred papers must complete a final oral examination. A final written examination may also be required at the option of the department. For further information about these examinations consult the sections titled *final oral examination* and *final written comprehensive examination* which follow.

Programs which do not require starred papers

Students completing Plan B programs which do not require starred papers are

required to satisfactorily complete a final written comprehensive examination. For further information, refer to the section titled *final written comprehensive examination* which follows.

Plan C: Students completing Plan C programs must complete a final oral examination over the portfolio of materials which have been developed in consultation with the adviser. A final written comprehensive examination may also be required at the option of the department. For further information see the sections titled *final oral examination* and *final written comprehensive examination* which follow.

FINAL ORAL EXAMINATION. Final oral examinations are required of all students whose programs require the completion of a thesis, field study, creative work, starred paper(s), or the Plan C portfolio. A candidate who fails the final oral examination in the first attempt may, with the approval of the adviser, take the examination a second time, but the candidate may **not** retake the final oral examination during the same quarter in which the exam was failed (the two summer terms are classified as one quarter). A third chance to pass the examination shall not be permitted. The specific requirements vary according to the nature of the project submitted.

Theses and Field Studies: At least three weeks prior to the close of the quarter in which graduation is anticipated, the student must request the Graduate Studies office to schedule a final oral examination. At this time four copies of the thesis or field study, each containing an abstract, must be submitted to the Graduate Studies office for approval of the form and style.

The final oral examination is conducted by the final evaluation committee, consisting of three members. Membership shall consist of adviser, another graduate faculty member from the major department, and one graduate faculty member appointed by the graduate dean. A majority vote of the final evaluation committee is required to pass the final oral examination.

Theses and field studies shall be approved, bound, and placed on file as described in *A Manual for the Preparation of Field Studies, Theses, Creative Works, or Starred Paper(s)* which is available in the Graduate Studies office.

Starred Papers: At least three weeks prior to the close of the quarter in which graduation is anticipated, the student must request the Graduate Studies office to schedule a final oral examination. At this time four copies of the starred paper(s) must be submitted to the Graduate Studies office for approval of the form and style.

The final oral examination is conducted by the final evaluation committee, consisting of three members. Membership shall consist of adviser, another graduate faculty member from the major department, and one graduate faculty member appointed by the graduate dean. A majority vote of the final evaluation committee is required to pass the final oral examination.

The starred paper(s) shall be approved, bound, and placed on file as described in *A Manual for the Preparation of Field Studies, Theses, Creative Works, or Starred Paper(s)* which is available in the Graduate Studies office.

Creative Work: Arrangements for the final evaluation conference must be made through the Graduate Studies office. The final evaluation conference must take place during the last quarter or term of the student's graduate program.

The final evaluation committee shall consist of three members who shall judge the artistic merits of the creative work. These three committee members are the same faculty representatives who served on the qualifying conference. A fourth voting member may be selected from another department within the university if deemed appropriate by the major adviser and/or the graduate dean.

Four copies of the creative work must be submitted to the Graduate Studies office at least two weeks prior to the date of the final evaluation conference. Final evaluation conferences are not scheduled during final test week.

The members of the final evaluation committee must sign the approval page to indicate their acceptance of the creative work. Four copies of the final creative work must be submitted to the Graduate Studies office and approved for binding. The creative work shall be approved, bound, and placed on file as described in *A Manual for the Preparation of Field Studies, Theses, Creative Works, or Starred Paper(s)* which is available in the Graduate Studies office.

Plan C, Project/Portfolio: At least three weeks prior to the close of the quarter in which graduation is anticipated, the student must request the Graduate Studies office to schedule the final oral examination. At this time the student must prepare a summary of the materials to be included in the project/portfolio. If the material is a single comprehensive project, the summary should be in the form of an abstract. If the material is a portfolio of smaller projects, the summary should be in the form of a brief synopsis of each of the projects.

The department may exercise its option to retain any or all materials prepared for the professional project/portfolio.

FINAL WRITTEN COMPREHENSIVE EXAMINATION. Candidates for the Master's degree under Plan B in which a starred paper is not completed are required to pass a final written comprehensive examination based on the major. Final written comprehensive examinations may be required under all other program plans at the option of the department. This examination is developed, administered, and evaluated by members of the staff responsible for the major program. All candidates must notify their adviser of their intention to complete the final written comprehensive examination at the beginning of the quarter in which completion of all degree requirements is anticipated. The candidate's adviser is the chairperson of this examination committee, which is appointed by the department chairperson, and which shall consist of at least three members. A majority vote of the examining committee is required to pass the final written comprehensive examination. A candidate who fails in the first attempt may, with the approval of the adviser, take the examination a second time, but the candidate may not retake the examination during the same quarter in which the exam was failed (the two summer terms are classified as one quarter). A third chance to pass the examination shall not be permitted.

GRADUATION OR COMPLETION

APPLICATION FOR GRADUATION OR COMPLETION. A candidate for the Master's or the Specialist degree, shall file an application for graduation accompanied by a \$10.00 non-refundable fee. This application is submitted to the Graduate Studies office at the beginning of the quarter or term in which the work for the degree is anticipated to be completed. Deadline dates for application for graduation are listed in the Academic Calendar section of this bulletin.

Students completing a Sixth Year or Fifth Year program shall file an application for completion accompanied by a \$10 non-refundable fee. This application for completion of the program is submitted to the Graduate Studies office at the beginning of the quarter or term in which the work is anticipated to be completed. Deadline dates are the same as those for application for graduation as listed in the Academic Calendar.

SUMMARY OF REQUIREMENTS FOR GRADUATION. It is the responsibility of the graduate dean to certify that a student has met all the following requirements for the degree sought.

1. Application for graduation accompanied by a \$10.00 non-refundable fee must have been submitted at the beginning of the quarter which the degree is to be granted.
2. The student must have satisfactorily completed all courses required on the approved program. All changes must be substantiated by an approved petition.
3. The student must have maintained a 3.0 (B) average in the major, in the total program, and in all graduate courses taken at St. Cloud State University.
4. The student must have satisfactorily completed the required final examination(s), written, oral, or both.
5. A student completing a thesis, field study, creative work, or starred paper(s) must have submitted four approved copies to the Graduate Studies office for binding, together with the required binding fee. Three additional abstracts must have been submitted by those completing a thesis or field study.

CONFERRING OF DEGREES. Degrees are conferred and commencement exercises held at the close of each quarter. While attendance at these exercises is not compulsory, students are urged to participate. Students will receive instructions from the Academic Affairs office.

ACADEMIC REGULATIONS

Graduate students are expected to become thoroughly familiar with the processes and regulations contained in this bulletin and are responsible for complying with its provisions.

CREDIT EARNED BEFORE ADMISSION. Only 9 quarter hours of graduate credit earned at St. Cloud State University prior to formal acceptance by the department to a graduate program, or the credits completed in the first quarter of registration (whichever is greater) will be permitted to apply toward completion of a student's graduate program. (Credits earned the first and second summer term are considered as one quarter of graduate work.) In unusual circumstances, credit earned in excess of these figures may be considered for approval by the graduate dean by the petition procedure.

CREDIT BY CORRESPONDENCE OR EXAMINATION. Credits earned through a correspondence course, from either St. Cloud State University or another institution, will not be accepted toward a graduate degree. St. Cloud State University does not provide an option whereby graduate credits can be earned by examination.

COURSE NUMBERING SYSTEM. Courses numbered from 500-699 may be used to satisfy the requirements of graduate degrees. Courses open only to graduate students are numbered 600-699. Many courses carry double numbers, e.g. 450-550. These courses are open to advanced undergraduate and to graduate students. To receive graduate credit, the student must register for the 500 number. Double-numbered courses require a clear differentiation between the undergraduate and graduate levels. This may be accomplished through differential credit (4 credits undergraduate, 3 credits graduate), additional assignments, or a differentiated marking system.

COURSE LOAD. Course load for graduate students is defined as follows: full-time = a minimum of 8 credits per quarter; $\frac{3}{4}$ time to $\frac{1}{2}$ time = a minimum of 6 credits per quarter. Any exceptions must be recommended by the student's adviser and approved by the graduate dean.

The maximum credit load (undergraduate, graduate and transfer credits combined) is 16 credits per quarter during the regular academic year and a maximum of 9 credits per summer term.

GRADUATE ONLY COURSE WORK. Effective fall quarter 1980, at least one-half the minimum requirements of curriculums leading to a Master of Science degree and to a Sixth Year program or Specialist degree must be met through courses, seminars, and other learning experiences offered only to graduate students.

Master of Arts degree programs must have a minimum of 15 credits earned in courses, seminars, and other learning experiences offered only to graduate students.

MARKS. The following marks are used in reporting the achievement of graduate students at this institution: A (excellent), B (good), C (acceptable), and D and F (unsatisfactory or failure). S (satisfactory) and U (Unsatisfactory) are used for certain specialized courses in which a more precise mark is not deemed appropriate. Other non-credit marks which are recorded on official transcripts include: I (incomplete), V (audit), W (withdrawn), and X (in progress). A grade of N is recorded when the instructor has failed to submit a grade for the student.

The completion of theses, field studies, some independent study projects, and certain special courses is not normally anticipated during the quarter in which the credit is registered. Where the work is projected to extend over two or more quarters, the grade will be recorded as X (in progress), until such time as the work is completed. If the X grade is not removed before five years has elapsed, or the student has graduated, whichever comes first, the X (in progress) will be changed to W (withdrawn).

When the student has completed all of the requirements for a master's thesis, creative work or a specialist degree field study, the adviser will submit a mark of S (satisfactory).

When a student who is otherwise doing satisfactory work in a course is unable, for reasons beyond control, to complete all course requirements during the term, a grade of I (incomplete) will be recorded. Such incompletes must be removed by the student within one quarter, except that an incomplete given in spring quarter must be removed by the end of the following fall quarter. If it is not removed within the time limit, the I (incomplete) is changed to F.

If the student has not met all of the requirements of a master's thesis or a specialist degree field study by the end of the quarter or term in which it was registered, the research will be reported as X (in progress). A master's thesis must be completed within the seven-year time limit set for the completion of a master's degree. A field study must be completed within the seven-year time limitation set for a specialist degree.

STANDARD OF SCHOLARSHIP. Calculation of grade point averages is based on a 4-point scale in which A=4, B=3, C=2, D=1, and Fail=0. S grades are not included in the calculation of the grade point average, however, U grades are included on the basis that U=0. Marks earned in courses accepted in transfer are not included in the calculation of the grade point average.

Candidates for a master's degree must maintain a 3.00 grade point average in the major field, the total program, and all graduate course work taken at this university.

Candidates for a specialist degree in information media and special education administration must maintain a 3.00 or higher average in the major field, the total program, and all graduate course work taken at this university. Candidates for a specialist degree in educational administration must earn a 3.25 grade point average over the course work taken in the Specialist degree program, and a 3.00 grade point average in all graduate course work taken at this university.

Candidates for the Sixth Year program in educational administration must earn a 3.00 grade point average over the course work taken in the program, and a 3.00 grade point average in all graduate course work taken at this university.

Courses in which a mark of D, F or U was earned will not be accepted for graduate credit; however, the honor point deficiency created by such marks must be made up by marks of A in other courses. If a course is repeated, both marks are used in determining the total grade point average.

The scholarship standards established for each program must be satisfied at each of three formal check-points for program completion; application for program approval, application to take the final examination(s) required for the degree, and for graduation.

Continued registration may be denied at any time during the program based on unsatisfactory scholarship.

Graduate students, accepted as candidates for the Master's degree, Specialist degree, or Sixth Year program, whose records show less than a 3.00 average (3.25 for the Specialist in educational administration) at the completion of the approved program of courses may be permitted to register for a maximum of 8 additional quarter hour credits to be earned in courses approved by the petition procedure. If, after the completion of these 8 additional credits, the average is still less than a 3.00 (3.25 for the Specialist in educational administration), the student will not be allowed to take additional graduate level work for the purpose of raising the average mark to qualify for the Master's degree, Specialist degree, or Sixth Year program.

RESIDENCE REQUIREMENT. Candidates for the Master's degree, Specialist degree, or Sixth Year program must earn a minimum of 30 quarter hours in on-campus classes (day and night combined). Graduate courses offered at resident centers established by the university are considered on-campus credit.

Individual departments may establish residence policies requiring a period of full-time study. Each student should consult with the major department to determine specific departmental requirements.

VALIDATION OF COURSES. Graduate courses taken at St. Cloud State University more than seven years prior to the date of graduation must be validated if used in meeting degree requirements. Graduate courses more than seven years old taken at other universities may not be validated as explained in the section titled Transfer Policy which follows. A course in which a student received a grade of "C" or less cannot be validated for use on the student's graduate program. For procedural information on how to submit courses for validation contact the Graduate Studies office.

TRANSFER POLICY. A maximum of 15 quarter hours of graduate work completed at other accredited colleges and universities or extension credit earned from this university may be considered for application to the program. To be considered for transfer, the credits must have been residence credits earned at an institution approved to offer graduate degree programs in the major field where the credit was earned, at the time the credit was earned, must be appropriate to the student's program, must be approved by the adviser and the Graduate Studies office, and must be recorded on the approved program forms. The student must request that two official transcripts be sent directly to the Graduate Studies office by the institution awarding the credit. (Official transcripts, submitted from other institutions, are for use in the applicant's admission process and pursuit of the degree at St. Cloud State University. These transcripts, or copies of them, cannot be issued to the student or other institutions.) The grade recorded for these credits must be B or above. No transfer credit shall be accepted that was earned more than seven years prior to completion of the degree.

With the prior approval of the graduate adviser and the graduate dean, a maximum of 24 quarter hours of appropriate graduate credit may be transferred from the other Minnesota state universities (Bemidji, Mankato, Moorhead, Southwest, Winona) and applied to a program at St. Cloud State University.

When transferring credit to a specialist degree program, a minimum of 30 of the last 45 credits must be taken at this institution.

After the student's program of study has been approved, no additional transfer credits will be accepted unless the student has received prior approval via the petition process.

ANY QUESTIONS OR CONCERNS ABOUT THE TRANSFERABILITY OF CREDIT EARNED AT OTHER INSTITUTIONS SHOULD BE DIRECTED TO THE GRADUATE OFFICE BEFORE A STUDENT ENROLLS FOR THAT CREDIT.

TIME LIMIT. All credits (including transfer credits) used in meeting requirements for a master's degree must be earned within seven years prior to the awarding of the degree.

All credits used in meeting the requirements for the Specialist degree and the Sixth Year Program must be completed within the seven-year period prior to the awarding of the degree.

DROP POLICY. A student may change registration for course work prior to the start of classes. These withdrawals will not be recorded on the student's record.

To determine the last date on which students may withdraw with a mark of W, the student should check the appropriate regular or summer class schedule.

ELIMINATION FROM A PROGRAM. A student may be eliminated from a graduate program for cause based on the recommendation of the adviser/graduate committee and the department chairperson, and the decision of the graduate dean.

INDEPENDENT STUDY. Each department offers independent study opportunities for advanced students wishing to pursue a special problem in the major area of concentration. These courses carry the designation: (name of department or program) 600, Special Problems. A maximum of 4 credits of special problems will be permitted on a graduate degree program.

WORKSHOP LIMITATION. Workshop courses may be applied to graduate degree programs within the following limitations:

- Master of Arts/Science
 - Plan A—6 workshop credits
 - Plan B—9 workshop credits
 - Plan C—15 workshop credits
- Specialist degree
 - 6 workshop credits
- Sixth Year program
 - 9 workshop credits
- Fifth Year program
 - 15 workshop credits

Workshops which are covered by this regulation include permanent workshops which carry a special department number, temporary workshops which carry 595 or 695 numbers, and continuing education workshops which carry a 588 number and which require special approval for inclusion in a degree program.

501 CREDIT BY ARRANGEMENT. Under certain circumstances, upper division courses (300 or 400-level) may be applied to master's degree requirements. To obtain approval, the student must submit a petition for approval by the instructor, the adviser, the department chairperson, and the graduate dean prior to registering for the course, and the student must make arrangements to complete the special graduate requirements of the course. A credit-by-arrangement form also will be needed in order to register for the 501 course.

Students who receive approval must register for (name of department or program) 501 (title of course).

A maximum of 9 credits earned under the 501 course number may be applied to a master's degree program.

This procedure is open only to students admitted to a graduate degree program.

FIELD TRIPS. No more than 9 credits earned through field trips may be counted toward completion of a master's degree. If field trips are registered as Independent Study 600, no more than 4 credits will be applicable to a degree program.

AUDIT. Students may enroll for courses for audit by securing the permission of the instructor of the course and the Dean, School of Graduate Studies. Auditors pay the regular fees.

Auditors are not permitted to take the course examinations nor will they be given credit for the courses audited. They must complete a separate registration and pay the regular course fees.

CORRESPONDENCE COURSES. Graduate correspondence courses are not offered by St. Cloud State University. Graduate credit earned through correspondence will not be accepted in transfer.

PROFESSIONAL EDUCATION CORE

The basic intent of the Professional Education Core is to include one course from each of three broad professional education areas in the Master of Science degree programs: educational foundations, curriculum, and instruction. Courses presently approved for each of these areas include:

- Educational Foundations
 - ED 604 School/Community Organizations and the Teacher, 3 Cr.

ED	605	The Adolescent and the School, 3 Cr.
ED	606	Problems in American Education, 3 Cr.
ED	607	The Student, the Teacher and the Law, 3 Cr.
ED	608	Children's/Student's Rights, 2 Cr.
ED	609	Comparative Education, 3 Cr.
ED	610	The School and the Social Order, 3 Cr.
ED	611	History of American Education, 3 Cr.
ED	612	Philosophy of Education 3 Cr.
ED	632	Senior High School Seminar, 3 Cr.

Curriculum

ED	602	Evaluation of the School Program, 3 Cr.
ED	625	Junior High School Seminar, 3 Cr.
ED	647	Secondary School Curriculum, 3 Cr.
ED	648	Curriculum Construction, 3 Cr.
ED	649	Practicum in Curriculum Construction and Development, 3 Cr.4

Instruction

ED	550	Nonverbal Communication and Education, 3 Cr.
ED	624	Schools for the Early Adolescent, 3 Cr.
ED	628	Modern Trends in Secondary Education, 3 Cr.
ED	631	Senior High School Theories and Practices, 3 Cr.
ED	640	The Classroom Teacher and Mainstreaming, 3 Cr.
ED	645	School Discipline, 3 Cr.
ED	654	Strategies, Development and Evaluation of Instruction, 3 Cr.
ED	655	Teaching Strategies for Practitioners, 3 Cr.

Other courses may be approved for professional education with the prior approval of the secondary education adviser and the graduate dean.

THE FIFTH YEAR PROGRAM IN TEACHER EDUCATION

The Fifth Year Program in Teacher Education is intended to provide a systematic basis for study beyond the baccalaureate degree for teachers who do not plan to qualify for a master's degree. Work included in the Fifth Year program is selected to strengthen the student in area(s) taught or to be taught. As nearly as possible, a student's Fifth Year program will be planned to provide an integrated five-year program of preparation for teaching. The Fifth Year program is available in nearly all of those teaching fields where master's degree programs are offered.

ADMISSION. Students seeking admission to the Fifth Year program must complete the application form and submit it accompanied by a \$10 non-refundable fee to the Graduate Studies office. They must also make arrangements to have two official copies of the undergraduate transcript sent from the college or university where the work was completed to the Graduate Studies office. All transfer work must be substantiated by two copies of official transcripts sent from the college or university where the work was taken.

An applicant will be granted admission to the Fifth Year program if a baccalaureate degree is held in teacher education from a college or university accredited by the National Council for Accreditation of Teacher Education, or the appropriate regional accrediting agency, or from an institution recognized by the state university of the state in which the college or university is located and if the student has earned a 2.00 grade point average over all undergraduate course work completed.

If the applicant holds a baccalaureate degree from an unaccredited institution, admission to the Fifth Year program may take place upon the submission of evidence that a valid teaching license is held in the state where the applicant teaches; and upon successful completion of 15 quarter hours of creditable work at this university.

Upon formal admission to the program, the student will be assigned an adviser. The adviser will assist in planning a program that has clear relevance to professional goals of the student.

PLANNING THE FIFTH YEAR PROGRAM. Before completion of 16 quarter hours of course work on the Fifth Year program, the student, with counsel from the adviser, must outline the courses to be completed to meet the Fifth Year program requirements. The necessary forms may be obtained from the Graduate Studies office or the student's adviser. The program forms must be prepared in triplicate. After the adviser has endorsed each of the three copies, the student will

send them to the Graduate Studies office for processing and distribution. One copy will be placed in the applicant's file in the Graduate Studies office; one copy will be returned to the adviser; and the third copy will be sent to the applicant. Any subsequent changes in the applicant's Fifth Year program must have the prior approval of the student's adviser and the Dean, School of Graduate and Continuing Studies via the petition process.

In order to complete the Fifth Year Program, the candidate must have met the following requirements:

1. The student must have earned a minimum of 45 quarter hours of creditable work: in secondary school programs, 15 of these credits must have been taken in courses open only to graduate students; in elementary school programs, 15 of these credits must have been taken at the graduate level.
 - a. The student must have earned a minimum of 33 quarter hours in the major and related areas.
 - b. The student must have earned a minimum of 9 quarter hours in professional education.
 - c. The student must have taken ED 614, Interpretation of Research, 3 Cr. or ED 615, Introduction to Research, 3 Cr.
2. At the beginning of the term or quarter when the student plans completion of the required course work, an application for completion of the program, accompanied by a \$10.00 non-refundable fee must be filed with the Dean, School of Graduate Studies.

CREDITS APPLICABLE. Of the 45 credits required to complete the program, a minimum of 15 credits must be earned in residence at St. Cloud State University.

A combined total of 30 extension, transfer, T.V. and tour credits with marks of C or better may be accepted on the Fifth Year program; however, not more than 15 credits will be accepted in transfer.

- A. Graduate and advanced undergraduate credits earned at other accredited colleges and universities after the awarding of a bachelor's degree (maximum, 15 credits).
- B. Extension from St. Cloud State University (maximum, 15-30 credits).
- C. Tours and T.V. (maximum, 9 credits).
- D. Workshops (maximum, 15 credits).

COURSE LOAD. The maximum load (undergraduate and graduate credits combined) for fifth year program students is 16 credit hours per quarter.

COURSE NUMBERING SYSTEM. Courses numbered in the 300, 400, 500, and 600 series are creditable in the Fifth Year program. Courses carrying numbers in the 100's and 200's may not be included in this program.

FEES. Students enrolled in the Fifth Year program will pay undergraduate fees when they enroll in undergraduate (300 and 400-numbered) courses and graduate fees when they enroll in 500- or 600-numbered courses.

MARKS. The academic achievement of students is recorded by the following system of marks: A (excellent), B (good), C (average), D (not acceptable), and F (failing). The mark X is given during the early quarter or quarters of a course which must be taken in a series of more than one quarter or term before any credit is earned. S means satisfactory performance in courses for which no more precise mark is generally available. U means unsatisfactory. Courses not completed during the regularly scheduled period will be recorded as I (incomplete). Such incompletes must be removed by students within the next quarter in order to receive credit for the course. For auditing, the mark recorded will be V.

STANDARD OF SCHOLARSHIP. Candidates for the Fifth Year program must maintain a grade point average of at least 2.25 in the major and in the total program.

Courses in which a mark of D or F was earned will not be credited toward completion of the Fifth Year Program.

A fifth year student may repeat one time a course which was failed or in which a D was received. When a course is repeated, both the old and the new marks will appear on the student's record. Both marks earned will be used in computing the grade point average.

Only courses taken at St. Cloud State University are used in computing the grade point average.

TIME LIMIT. All credits used in completing the Fifth Year program must be earned within 10 years of the completion of the program.

COMPLETION OF THE FIFTH YEAR PROGRAM. The satisfactory completion of an approved Fifth Year Program in Teacher Education is verified by an appropriate statement on the transcript.

ALL UNIVERSITY COURSES



EDUCATIONAL TOURS

(Name of Department or Program) **510 Educational Tours.** Tours taken under supervision of the university. Exact nature of course will be defined by the department or program involved, subject to approval of the administration. 1-8 Cr.

EXPERIMENTAL COURSES

Departments may offer graduate courses on an experimental basis. Proposals for these courses must contain a syllabus with a title and description for the student's record and be approved through the curricular process as established by the Faculty Association and the administration on October 29, 1976.

Double-numbered courses are assigned numbers by the department from those available at the 400-500 level. Graduate only courses are assigned numbers from the block set aside for this purpose.

(Name of Department or Program) **690-694. Selected Topics in** (Name of Department or Program): (Select special title for each offering). May be repeated to a max. of 9 Cr. 1-4 Cr.

INDEPENDENT STUDY

600. Special Problems. Independent study for advanced students wishing to work out a special problem in the major area of concentration. 1-4 Cr.

WORKSHOPS

Workshops are of two types.

(Name of Department or Program) **595 and 695 (Special title for each offering).** Area limited and specific subjects selected before workshop is announced. These workshops are intended to support established degree programs and may be included on a student's approved program within the workshop limitations established for each program option. (See Academic Regulations.)

(Name of Department or Program) **588 (Special title for each offering).** Area limited and specific subjects selected before workshop is announced. These workshops are designed to meet the needs of graduate students for continuing education or enrichment. Workshops numbered 588 may be included as a part of the graduate degree only with the specific approval of the adviser and the graduate dean. This approval may be obtained either by inclusion of the course at the time of program approval or through the petition process.

COLLEGES



COLLEGE OF BUSINESS

124 BUSINESS BUILDING/255-3212

James Kelly, Dean

Wayne Little, Assistant Dean

DEPARTMENTS OFFERING GRADUATE DEGREE PROGRAMS

Accounting, M.S.

Business Computers and Information Systems

Business Education and Office Administration, M.S.

Management and Finance

Marketing and General Business

M.B.A. program offered jointly by all the departments

Master's degree programs are accredited by the American Assembly of Collegiate Schools of Business and the North Central Association of Colleges and Schools.

OBJECTIVES

Master of Business Administration (M.B.A.)

The purpose of the Master of Business Administration degree is to develop qualified business administrators for positions of management responsibility in a changing society. Specifically, the M.B.A. program is designed to prepare graduates who have attained:

- A. a comprehension of policy formulation and implementation.
- B. an awareness of environmental forces effecting the firm.
- C. a comprehension of the use of quantitative data and analytical techniques as they pertain to business administration.
- D. a working knowledge of the functional areas in business.
- E. the capability to communicate effectively, both orally and in writing.

MASTER OF SCIENCE—ACCOUNTING (M.S.)

The Master of Science degree in accounting is oriented to those students who desire advanced education in accounting. The goal of the program is to prepare graduates who will have the special skills required to meet the needs of the accounting profession. These skills include:

- A. financial accounting theory and practice.
- B. auditing theory and practice.
- C. tax accounting.
- D. managerial accounting.
- E. professional research.
- F. communication skills.
- G. management advisory services.

MASTER OF SCIENCE—BUSINESS EDUCATION (M.S.)

The Master of Science degree in Business Education is designed to:

- A. provide a comprehensive understanding of the field of business education.
- B. develop a working knowledge of the functional areas of business and education.
- C. integrate teaching methods and knowledge of subject matter content with an awareness of research to develop instructional and administrative skills in business education.
- D. expand communication capabilities, both written and oral.

MASTER OF BUSINESS ADMINISTRATION (M.B.A.)

Admission Policy. The applicant for admission to the Master of Business Administration program must meet the following requirements:

1. a baccalaureate degree from an accredited college or university.
2. an acceptable score on the Graduate Management Admission Test (GMAT).
3. evidence of undergraduate scholarship.
4. demonstration of aptitude for successful graduate business study.

Admission is competitive and selection is based on an evaluation of the total factors.

Information about the GMAT can be obtained at the Graduate Studies office and the office of the Dean, College of Business.

The candidate for the Master of Business Administration degree must satisfy the requirements for all master's degree programs as set forth by the School of Graduate Studies.

Applicants who have successfully met admission requirements may enroll in the M.B.A. program as full-time day students or on a part-time basis in evening courses. Full-time students should also expect to complete part of the program in the evening.

Phase I—M.B.A.

M.B.A. candidates admitted into the program must have completed the equivalent of the following foundation courses before starting Phase II graduate courses:

BCIS 150. Data Processing for Business. Role of the computer in information processing; components of a computerized business information center; manipulating, storing, and transmitting computerized information; tools for analysis and planning computer programs; introduction to procedure-oriented languages; and programming projects. 4 Cr. F, W, S, SUM.

BCIS 341. Operations Research I. Deterministic models such as assignment problems, transportation problems, problems of traveling sales representatives, linear programming, dynamic programming and inventory models. Prereq.: MBA 242. 4 Cr. F, W, S, SUM.

ECON 559. Economic Analysis. The equivalent of Economics I and II. The economic process, national income analysis, money and the banking system, theory of income distribution, pricing systems, resource allocation. Primarily for M.B.A. students. 4 Cr. F, DEMAND.

MBA 539. Business Law and the Legal Environment. The politico-legal framework within which business operates is examined using case studies of business as it is affected by law and social pressures and needs. Examination of policy and rationale of contracts, sales product liability and various related legal topics. (For admitted graduate students only.) 4 Cr. F.

MBA 549. Quantitative Analysis for Business. Selected topics from the quantitative methods area with major emphasis on applications in business. (For admitted graduate students only.) Prereq.: MATH 131 or equivalent. 4 Cr. F.

MBA 569. Management of Organizations. Critical examination of behavior within organizations and organization design as they relate to the management of organizations. (For admitted graduate students only.) 4 Cr. S.

MBA 591. Principles of Accounting. External and internal financial reporting systems and their roles in planning, control, and evaluation of management action. (For admitted graduate students only.) 4 Cr. W.

MGMF 363. Production and Operations Management. Transformation of inputs (material, labor, management and capital) into outputs (goods and services) in manufacturing and service organizations, management, design, analysis, and control of productive systems. 4 Cr. F, W, S, SUM.

MGMF 371. Managerial Finance. Financial analysis and methods involved for financing various enterprises. 4 Cr. F, W, S, SUM.

MKGB 320. Introduction to Marketing. Analysis, planning and control of marketing functions viewed as a total operating system. 4 Cr. F, W, S, SUM.

Courses used to satisfy Phase I requirements may not be used to reduce the course requirements under Phase II. An average of B or above is required for course work taken in Phase I.

Phase II—M.B.A.

1. The following must be completed by all M.B.A. students. These courses are open to admitted graduate students only.

MBA 629. Marketing Plans and Decision-Making. Analysis and planning for decision making in marketing; development of consumer oriented policy in the areas of product, price, logistics, and promotion. 4 Cr. S.

MBA 632. Decision-Making Techniques. Theory of business decision-making applications of analytical tools to business problems. Case study. 4 Cr. F.

MBA 663. Production and Operations Management. Case studies of companies from selected industries that emphasize the direction of operating systems comprising people, material, facilities and information that create goods and/or services. 4 Cr. W.

MBA 670. Corporate Strategies. Analyses, case studies and outside readings in contemporary management problems. (This course must be taken in the last quarter of the M.B.A. program.) 4 Cr. F, S.

MBA 671. Financial Management Policy. Problems confronting corporate financial management in analyzing financial requirements. Prereq.: ECON 677 or permission of instructor. 4 Cr. S.

MBA 673. Management of Human Resources. Analysis of principles applicable to problems arising out of individual and group employment relations; theories of selecting, developing, motivating, and accounting for human resources. 4 Cr. W.

ECON 677. Business Economics. Economic analysis as an aid in business management and control. 4 Cr. W.

MBA 683. Managerial Accounting. Development of cost functions, cost-volume-profit relationships, performance measurement and evaluation and the allocation of scarce resources as an aid to the internal decision-making process. 4 Cr. F, SUM.

MBA 684. Corporate Financial Reporting. Accounting systems and their role in the evaluation of assets, the determination of income, and the measurement of equities with concentration on the interpretation of published accounting statement. 4 Cr. W.

2. In addition to the required courses outlined above, the candidate must elect with the adviser's approval 12 graduate quarter credits. The candidate may use these electives to develop a concentration in one or more of the following areas:

- Accounting
- Business Computer Information Systems
- Economics
- Finance
- International Business
- Management
- Marketing
- Office Administration

The M.B.A. program requires graduate students to complete a minimum of 48 quarter credits with an average of B or better.

M.B.A. students may include an International Business emphasis in their graduate program by selecting 12 credits from the following courses:

625. Multinational Marketing Research. Designed to provide the student with marketing

research techniques, methods and processes for international markets. Provides understanding of market research in multicultural environmental markets. 4 Cr. W.

627. Multinational Marketing Management. Stresses the management of multinational corporations in dealing with international markets. It focuses on the problem of planning, implementing, controlling, and evaluating their international marketing programs. Also emphasizes the role of international competition in the world markets. 4 Cr. F.

675. Multinational Business Management. Encompasses the understanding of cultural, economic, socio-political and technological factors in managing multinational corporations. Focuses on comparative management approaches suitable for managing human and material resources. Emphasis could be on current issues and effective management in multinational corporations. 4 Cr. F.

676. Multinational Financial Management. Encompasses the understanding of financial flows in multinational corporations operating in a world-wide or regional environment. Includes capital budgeting (asset allocation), financing within own or foreign nations, and regulations and taxes affecting flows of monies across international boundaries. Prereq.: International Economics and undergraduate finance. 4 Cr. DEMAND.

693. International Accounting. A comparative review of accounting theory and practice, taxation, and special reporting problems of several major industrial countries. Environmental, political, and cultural considerations emphasized. 4 Cr. F.

3. A final written comprehensive examination must be satisfactorily completed during the quarter the student intends to graduate. Further information will be found under *final written comprehensive examination* on page 24.

Course listings appropriate to this section may be found in the following departments: Accounting, Management and Finance, Marketing and General Business, Business Computer Information Systems, Economics, and Business Education and Office Administration.

Scheduling Plan

The following course sequence is recommended:

Phase I*		Phase II*	
Fall	MBA 539	Fall	MBA 632
	MBA 549		MBA 683
	ECON 559		2 Electives
Winter	MBA 591	Winter	MBA 663
	BCIS 150		MBA 684
	BCIS 341		MBA 673
Spring	MBA 569		ECON 677
	MGMF 363	Spring	MBA 629
	MGMF 371		MBA 671
	MKGB 320		1 Elective
			MBA 670
			Comprehensive Exam

Candidates should make every effort to complete Phase II in the order suggested. Students may not enroll in any 600 level course unless prerequisites have been met.

***Students enrolled as full-time students may complete the M.B.A. program in two years or less, depending on the number of Phase I requirements completed prior to admission.**

MASTER OF SCIENCE (M.S.)

For information on the Master of Science degree program with a major in accounting, see the Department of Accounting, page 39. For information on the Master of Science degree program with a major in business education, see the Department of Business Education and Office Administration, page 49.

COLLEGE OF EDUCATION

A110 EDUCATION BUILDING/255-3023

Owen Hagen, Interim Dean

DEPARTMENTS AND CENTERS OFFERING GRADUATE DEGREE PROGRAMS

Center for Child and Family Studies

Administration, M.S.

Early Education, M.S.

Special Needs Children, M.S.

Center for Educational Administration and Leadership

Elementary School Administration, M.S. and Specialist

Secondary School Administration, M.S. and Specialist

School Business Management, M.S.

General School Administration (Superintendency) Specialist

Health Education and Traffic Safety

Health Education, M.S.

Center for Information Media

Educational Media, M.S.

Human Resources Development/Training, M.S.

Information Technologies, M.S.

Information Media, Specialist

Physical Education and Recreation

Physical Education, M.S.

Psychology

Behavior Analysis, M.S.

Community Counseling, M.S.

Rehabilitation Counseling, M.S.

Secondary School Counseling, M.S.

Special Education

Special Education, M.S.

Special Education Administration, Specialist

Teacher Development

Curriculum and Instruction - Elementary School Education, M.S.

Curriculum and Instruction - Middle School/Junior High School
Education, M.S.

Curriculum and Instruction - Senior High School Education, M.S.

Curriculum and Instruction - Reading Teacher Education, M.S.

Reading Consultant, M.S.

CENTER OFFERING SUPPORTING GRADUATE COURSES

Center for Human Relations and Multicultural Education

OBJECTIVES

The College of Education, through its centers and departments, offers a wide variety of programs and services intended to meet the present and future needs and interests of its students as well as those of the broad community and the region which it serves. In concert with the mission of the university, the faculty, staff, and administration of the College of Education endorse the following values as guides to the development and delivery of its programs and services:

1. With respect for all members of the college community, seek excellence in education through a commitment to the full development of each participant in college programs and services.

2. Excellence in education through the development of positive educational environments.
3. Academic excellence through active leadership and participation in research and evaluation endeavors relative to college programs and services.
4. Collaboration among all members of the college community in the development, improvement, and delivery of college programs and services is valued and sought as an avenue to educational excellence.
5. High value on the concept of life-long learning, seeking to reflect that value in college programs and services.
6. High value on multicultural education, cultural pluralism, seeking to reflect that value in college programs and services.
7. Excellence in education through the integration of theory with practice, and the effective incorporation of advances in technology and educational research.
8. Commitment of talents, resources, and energies to providing graduate and continuing education programs and services of high academic quality, responsive to the needs and interest of the community served by the college.

In addition to the courses and activities offered to support the programs available through departments and centers in the College of Education, there are also some courses offered as service courses to programs available through other departments in the university.

COLLEGE OF FINE ARTS AND HUMANITIES

101 KIEHLE VISUAL ARTS CENTER/255-3093

Donald Sikkink, Dean

Ray Rowland, Special Assistant to the Dean

DEPARTMENTS OFFERING GRADUATE DEGREE PROGRAMS

Art, M.A. and M.S.

Communication Disorders, M.S.

English, M.A. and M.S.

Music, M.S.

DEPARTMENTS OFFERING SUPPORTING GRADUATE COURSES

Foreign Languages and Literature

Mass Communications

Philosophy

Speech Communication

Theatre

OBJECTIVES

Graduate programs in the College of Fine Arts and Humanities serve differing kinds of needs: the needs of persons preparing for professional careers in one of the arts; the needs of certified elementary, secondary, vocational or junior college teachers; the needs of graduate students preparing for a career in research and teaching on the university level; and the needs of college and university graduates who wish to continue their personal or professional development.

COLLEGE OF SCIENCE AND TECHNOLOGY

145 MATHEMATICS AND SCIENCE CENTER/255-2192

Louise H. Johnson, Dean

DEPARTMENTS OFFERING GRADUATE DEGREE PROGRAMS

Biology, M.A. and M.S.

Industrial Studies, M.S.

Mathematics and Statistics, M.A. and M.S.

DEPARTMENTS OFFERING SUPPORTING GRADUATE COURSES

Chemistry

Computer Science

Earth Sciences

Physics, Astronomy and Engineering Science

Technology and Industrial Engineering

OBJECTIVES

Through its nine departments, the College of Science and Technology provides education in a variety of professional skills at the graduate levels. It is our purpose to prepare students to assume various roles in society and provide them with the skills and knowledge necessary not only for useful and gainful employment or further graduate study, but also for an understanding of the varieties of the human condition, its experiences, and its possibilities.

As in its undergraduate programs, the College of Science and Technology strives to:

1. Foster independence of thought by encouraging an analytical attitude toward ideas and ways of doing things.
2. Promote innovative thinking and the acceptance of both continuity and change as two fundamental principles that guide the life of any society.
3. Provide the foundation of knowledge and learning so necessary if both criticism and innovation are to be serious, well-considered, and responsible.
4. Develop broader perspectives on the issues affecting the student's personal life, community, nation and world so he/she may act with the wisdom and civility that should be the hallmark of a democratic society.
5. Educate the student in the knowledge and skills important today in a wide array of occupations in the public and private sectors and at both professional and pre-professional levels.
 - a) Owing to the need in many occupations for increased knowledge about the social and physical world within which people carry out their occupational responsibilities, the College seeks to acquaint the student with 1) the social, historical, and philosophical factors in people's values, attitudes, needs, and behavior; and 2) the physical processes and geographic realities that underlie and affect resources availability and utilization.
 - b) The College seeks to give students the tools, or methods, with which to gather, analyze, and evaluate information, as well as the skills to communicate their thinking to others.

COLLEGE OF SOCIAL SCIENCES



101 WHITNEY HOUSE/255-4790

Raymond Merritt, Dean
David Carr, Assistant Dean

DEPARTMENTS OFFERING GRADUATE DEGREE PROGRAMS

Criminal Justice, M.S.

Economics

Social Science: Economic Education, M.S.

Geography, M.S.

History, M.A. and M.S.

Interdisciplinary Studies

Social Science, M.S.

DEPARTMENTS AND PROGRAMS OFFERING SUPPORTING GRADUATE COURSES

Interdisciplinary Studies

American Studies, Gerontology, Social Studies

Political Science

Sociology/Anthropology

Social Work

OBJECTIVES

The graduate programs and courses in the College of Social Sciences are designed to meet the needs of students with a wide range of interests. The major objective is to serve both full- and part-time students, providing the skills and knowledge needed for professional advancement, entry into a new career, further graduate study, or for enhancement of living.

All the programs have in common a search for understanding of how the systems into which humans are born—geographical, social, political, economic, cultural—affect us, and how they relate to one another. These issues are approached in both historical and contemporary contexts, using a variety of methodologies—scientific and humanistic, theoretical and practical.

Special resources available to students in the College include the Social Sciences Microcomputer Laboratory, the Philip L. Tideman Cartographic Center, and the Evelyn Payne Hatcher Museum of Anthropology.

DEPARTMENTS, CENTERS, AND PROGRAMS

Accounting (ACCT)

310 BUSINESS BUILDING/255-3038

Chairperson: Lawrence Sundby

Graduate Faculty: R. Carlson, Kruse, Lere, D. Lu, Roser, Schwieger, Sundby

MASTER OF SCIENCE—ACCOUNTING

Admission Policy. The applicant for admission to the Master of Science in accounting program must meet the following requirements:

1. a baccalaureate degree from an accredited college or university.
2. an acceptable score on the Graduate Management Admission Test (GMAT).
3. evidence of undergraduate scholarship.
4. demonstration of aptitude for successful graduate business study.

Admission is competitive and selection is based on an evaluation of the total factors.

Information about the GMAT can be obtained at the Graduate Studies office and the dean's office, College of Business.

The candidate for the Master of Science degree in accounting must satisfy the requirements for all master's degree programs as set forth by the Office of Graduate Studies.

Applicants who have successfully met admission requirements may enroll in the Master of Science degree in accounting program as full-time day students or on a part-time basis in evening courses. Full-time students should also expect to complete part of the program in the evening.

Graduate Degree Requirements

Plan B, 48 Cr.

I. General: 24 Cr.

MBA 670 Corporate Strategies, 4 Cr.

Courses selected by the student and adviser (at least 12 Cr. at 600 level), 20 Cr.

II. Prescribed: 20 Cr.

ACCT 680 Professional Research, 4 Cr.

ACCT 682 Cost Accounting Theory, 4 Cr.

ACCT 692 Advanced Financial Accounting Seminar, 4 Cr.

ACCT 693 Advanced Tax Seminar, 4 Cr.

ACCT 694 Advanced Auditing Seminar, 4 Cr.

III. Accounting Elective from 500-600 level courses, 4 Cr.

IV. Candidates are required to successfully complete one starred paper with a final oral examination.

FOUNDATION COURSES

Applicants accepted into the M.S. in accounting program must have completed the following courses (or equivalent) prior to starting graduate courses:

MBA 549. Quantitative Analysis for Business. Prereq.: MATH 131 or equivalent. 4 Cr. F.

MBA 591. Financial Control. (For admitted graduate students only.) 4 Cr. W.

MBA 569. Management of Organizations. (For admitted graduate students only.) 4 Cr. S.

ECON 559. Business Analysis. (For admitted graduate students only.) 4 Cr. DEMAND.

BCIS 150. Data Processing for Business. 4 Cr. F, W, S, SUM.

MKGB 235. Business Law. 4 Cr. F, W, S, SUM.

MKGB 320. Introduction to Marketing. 4 Cr. F, W, S, SUM.

MGMF 363. Production Management. 4 Cr. F, W, S, SUM.

MGMF 371. Managerial Finance. 4 Cr. F, W, S, SUM.

For complete course descriptions, see the Undergraduate Bulletin.

ACCT 380. Cost Accounting I. Prereq.: MBA 285 or equivalent. 4 Cr. F, W, S, SUM.

ACCT 381. Intermediate Accounting I. Prereq.: MBA 285 or equivalent. 4 Cr. F, W, S, SUM.

ACCT 382. Intermediate Accounting II. Prereq.: 381. 4 Cr. F, W, S, SUM.

ACCT 383. Intermediate Accounting III. Prereq.: 382. 4 Cr. F, W, S, SUM.

ACCT 482. Business Taxation. 4 Cr. F, W, S, SUM.

ACCT 483. Advanced Income Tax. Prereq.: 385. 4 Cr. F, W, S, SUM.

ACCT 486. Auditing Theory. Prereq.: 383. 4 Cr. F, S, SUM.

MKGB 436. Business Law. 4 Cr. F, W, SUM.

An average of B or above is required for all foundation and advanced graduate courses.

COURSE DESCRIPTIONS

538. International Business Seminar. The course is designed to serve as an integrated capstone for international business. It includes understanding of the problems faced by international business, policy and decision-making processes as well as control and evaluation of international business. Prereq.: 493; MGMF 470, 473; MKGB 427. 4 Cr. S.

581. Advanced Accounting. Theory and practice of accounting for business combinations; parents and subsidiary accounting for consolidated financial statements. Consent of department chairperson. 4 Cr. F, S, SUM.

582. Business Taxation. Federal income taxation of business organizations including corporations and partnerships. Property transactions and other general business topics also covered. 4 Cr. F, W, S, SUM.

583. Personal Taxation. Federal income taxation of individuals including the topics of gifts, estates, and trusts. 4 Cr. F, W, S, SUM.

586. Financial Auditing. Nature of the audit function; nature of the audit evidence; audit standards and procedures; professional ethics; audit reports. Prereq.: C in 383. 4 Cr. F, S, SUM.

587. Operational Auditing. Nature of internal (and operational) auditing, auditing in an EDP environment and the use of statistical sampling in auditing. Prereq.: C in 383. 4 Cr. S.

588. Accounting Systems. System planning, design, and applications; emphasis is placed on the interaction of computers and accounting in the development of management information systems. 4 Cr. DEMAND.

590. Advanced Managerial Accounting. A study of the essential issues of cost analysis emphasizing the development and use of cost data appropriate for implementation of long and short run decision making, control and evaluation models. Prereq.: 380, MATH 231, BCIS 241. 4 Cr. S.

593. International Accounting. A comparative review of accounting theory and practice, taxation, and special reporting problems of several major industrial countries. Environmental, political, and cultural considerations emphasized. 4 Cr. S.

596. Accounting for Non-Profit Organizations. Nature, usefulness and limitations of accounting information as a tool for program planning and control in non-profit organizations. 4 Cr. SUM.

COURSES FOR GRADUATE STUDENTS ONLY

605. Business Seminar—Accounting. Selected topics related to accounting theory and practice. Consent of department chairperson. 4 Cr. F.

680. Professional Research. A research seminar for graduate students. 1-4 Cr. DEMAND.

681. Income Determination Theory. The evolution of accounting thought as it relates to income determination, i.e. the balance sheet, the service, the value, and the information theory approaches. 4 Cr. DEMAND.

682. Cost Accounting Theory. Cost accounting concepts and techniques with emphasis on the goals of the firm and the possible aid in achieving these goals through cost control, cost analysis, budgets, and forecasting. 4 Cr. W.

692. Advanced Financial Accounting Seminar. Advanced study of institutions which currently impact on the development of financial accounting and reporting standards. 4 Cr. S.

693. Advanced Tax Seminar. Study of federal tax system involving theory and evolution, including comprehensive coverage of taxation of corporate distributions, liquidations and reorganizations, estates and trusts, and tax research. 4 Cr. F.

694. Advanced Auditing Seminar. Advanced study of auditing in an EDP environment. Planning, evaluation of internal controls, use of computer audit techniques, statistical sampling, documentation, and communication of audit findings will be emphasized. 4 Cr. S.

American Studies (AMST)

104C STEWART HALL/255-2140

Director: William Morgan

Also see Interdisciplinary Studies Department.

COURSE DESCRIPTIONS

550. Urban Heritage. An examination of the American city considered from the viewpoints of esthetic value (layout, use of space, architectural merit, individual features); social history with special emphasis upon housing; and the role of preservation considered from social, esthetic, and historical aspects. No prereq. 205 recommended. 4 Cr. S, DEMAND.

590. Contemporary American Culture. The exploration of one of the variety of cultures in contemporary America through its political, philosophical, literary and artistic creations and its relationship to the overall diversified cultural pattern. A general elective. 4 Cr. W, S.

Art (ART)

101 KIEHLE VISUAL ARTS CENTER/255-4283

Chairperson: Anita Mills

Graduate Faculty: Aiken, Alhelm, Brown, Coen, Ellingson, Gutteter, Halberg, Mills, Roy, Wallin

These programs are designed for both full-time and part-time students. Students must expect to complete their course loads by enrolling mainly in daytime courses. Parts of the programs may be completed in evening and summer quarter classes.

MASTER OF ARTS

The applicant for admission to this program must have the equivalent of an undergraduate major in Art. For unconditional admittance, the student must have an undergraduate grade point average of 2.8 or above; applicants whose undergraduate grade point average is less than 2.8 may be admitted conditionally. The applicant must also submit a portfolio of original work. Contact the Chairperson, Department of Art, for specific instructions of what should be included in the portfolio and how it should be submitted.

At least 15 credits must be earned in art courses in which enrollment is limited to graduate students.

Plan A: Min., 46 Cr.

- I. Min. of 18 Cr. earned in one major field of studio art. Majors available in ceramics, painting, printmaking, photography, fibers, sculpture, glassworking, and jewelry. Min. of 9 Cr. earned in one minor field of studio art. Minors available in any of the above major areas. Min. of 12 Cr. earned in art history. Min. of 4 Cr. of electives earned in art history or studio art. Min. of 3 Cr. of creative work (ART 698) in the candidate's major field of study. This is accomplished by a written analysis or description of the work and an abstract thereof.
- II. A quarterly review of studio work completed in the major field of study must show satisfactory achievement. The candidate will complete a successful exhibit of creative work during the last quarter of residence. The department reserves the right to keep work from the exhibition. This work becomes part of the permanent collection of the departmental gallery.

MASTER OF SCIENCE—Art Education

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution and must have completed at least an undergraduate minor in art in order to choose it as a major at the graduate level. In some cases, it may be necessary for the applicant to complete some prerequisite undergraduate work even though the student may have completed an undergraduate major or minor.

At least one-half of the Master of Science degree program must be earned in courses in which enrollment is limited to graduate students.

Plan A, 46 Cr.

- I. Research: Min., 12 Cr.
 ED 615 Introduction to Research, 3 Cr.
 ART 685 Research in Art Education, 3 Cr.
 ART 699 Thesis, 6 Cr.
- II. Major: Min., 18 Cr.
 Prescribed:
 Minimum of 18 Cr. to be selected with major adviser.
- III. Professional Education: Min., 9 Cr.
 Credits to be selected with approval of professional education adviser.
- IV. Electives: Min., 10 Cr.

COURSE DESCRIPTIONS

530. Ancient and Classical Art. The art of the great ancient civilizations including Egyptian, Mesopotamian, Aegean, Greek, Etruscan, and Roman. 4 Cr. DEMAND.

531. Early Christian and Medieval Art. Christian art from the catacombs of Rome to the Gothic Cathedrals of Western Europe and the art of the Byzantine Empire. 4 Cr. DEMAND.

532. Renaissance Art. The art of the Italian Renaissance beginning with Giotto and including the masters of 15th and 16th century northern Europe. 4 Cr. DEMAND.

533. Baroque and Rococo Art. European art of the 17th and 18th centuries including El Greco, Rembrandt, Bernini, etc. 4 Cr. DEMAND.

534. European 19th Century Art. Neo-Classicism, Romanticism, Realism, Impressionism, and Postimpressionism are emphasized. 4 Cr. DEMAND.

535. History of American Art I. Art of America from the Indian cultures through the United States of the pre-Civil War period. 4 Cr. DEMAND.

536. History of American Art II. Painting, sculpture, architecture, prints, and crafts from the Civil War to present. 4 Cr. DEMAND.

537. Modern Art, 1900-1945. Movements and concepts of modernism in the first half of the 20th century, including Fauvism, Cubism, Constructivism, de Styl, Dada, Surrealism. 4 Cr. W.

538. Art in Minnesota. Painting, sculpture and architecture in the Minnesota Territory and State from the establishment of white settlement (around 1830) to the present. 2-4 Cr. S.

572. Ceramics Studio Equipment and Kiln Construction. Design and construction of clay working equipment, use of refractories and fuels in kiln technology. Prereq.: 370 or 371. 3-9 Cr. DEMAND.

573. Ceramic Studio Operation and Management. Apprenticeship and studio visitation. Prereq.: 470 or 471. 3-9 Cr. DEMAND.

574. Specified Culture or Area of Ceramic Art History. Guest lecturer. Prereq.: 270, 320. 4 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

606. Photography I. A studio-research course designed to increase the student's familiarity with contemporary notions of photographic art in relationship with his/her personal work and historical perspective. Prereq.: 2 courses in undergraduate photography or permission of the department chairperson. 3-9 Cr. F, W, S.

607. Photography II. Application of photography as a research tool in documenting reality with emphasis on the variables of perception and the technology of the media. Prereq.: 606. 3-9 Cr. F, W, S.

615. Life Drawing I. Practice in pictorial composition with various techniques and media of expression. Emphasis on anatomy of human body. 3-9 Cr. F, W, S.

616. Life Drawing II. Advanced practice in pictorial composition with various techniques and media of expression. Emphasis on anatomy of human body. 3-9 Cr. DEMAND.

620. Advanced Theory. Foundations of criticism, form analysis, psychology, and philosophy of art. 4 Cr. DEMAND.

630. Art Seminar. Lectures, readings and discussions on selected artists and their works. 1-4 Cr. May be repeated to max. of 9 Cr. F, W, S.

641. Painting I. Advanced expression in the painting media; organization, color and technique. Prereq.: 2 undergraduate courses in painting or permission of the department chairperson. 3-9 Cr. F, W, S.

642. Painting II. Continued work in painting media leading to development in individual expression. Prereq.: 541. 3-9 Cr. F, W, S.

643. Watercolor Painting. Practice in transparent watercolor painting, casein, tempera, and combined media. 2-6 Cr. DEMAND.

651. Prints and Composition I. Advanced experience in printing methods and composition. Developing previously learned techniques. Prereq.: 2 undergraduate courses in printmaking or permission of the department chairperson. 3-9 Cr. F, W, S.

- 652. Prints and Composition.** Advanced experiences in printing methods and composition. Intense concentration in a selected printing method. Prereq.: 651. 3-9 Cr. F, W, S.
- 661. Sculpture I.** Advanced work in three-dimensional organization of form; individual concentration toward competent expression in sculpture media. Prereq.: 2 undergraduate courses in sculpture or permission of the department chairperson. 3-9 Cr. F, W, S.
- 662. Sculpture II.** Continued work in sculpture media with emphasis on casting metals. Prereq.: 661. 3-9 Cr. F, W, S.
- 670. Ceramic Sculpture.** Creative expression in the ceramic media, composite construction. Prereq.: intermediate, undergraduate proficiency in ceramics and permission of the department chairperson. 3-9 Cr. F, W, S.
- 671. Throwing.** Advanced work utilizing the potter's wheel, glazing and firing. Prereq.: 2 undergraduate courses in ceramics or permission of the department chairperson. 3-9 Cr. F, W, S.
- 672. Ceramics.** Continued work in the ceramic media with emphasis on clay and glaze technology, kiln supervision. Prereq.: 670 or 671. 3-9 Cr. F, W, S.
- 676. Fibers.** Advanced creative experiences in design and production on various looms; characteristics of looms, principles of textile construction, and materials of the weaver. Prereq.: 2 undergraduate courses in weaving or permission of the department chairperson. 3-9 Cr. F, W, S.
- 677. Fibers II.** Emphasis upon the unique surface quality and surface decoration possibilities with fibers may include screening, canning, resist, batik, stitching, applique, quilting, etc. Prereq.: 676. 3-9 Cr. F, W, S.
- 681. Metals.** Advanced experience in jewelry design, silversmithing, and casting by the lost wax method. Prereq.: 2 undergraduate courses in jewelry and enameling or permission of the department chairperson. 3-9 Cr. F, W, S.
- 682. Metals II.** Advanced experiences in jewelry design, silversmithing, and casting by the lost wax method. Prereq.: 681. 3-9 Cr. F, W, S.
- 685. Research in Art Education.** Current experiments in art education and closely related fields. Required of students working for a master's degree in art. 3 Cr. DEMAND.
- 686. Current Problems in Art Education.** Statement, analysis and evaluation of art problems evidenced in contemporary living, in school, home and community. 3 Cr. DEMAND.
- 688. Glassworking I.** Advanced work in glassworking techniques with emphasis on individual concentration toward competent expression in glass. Prereq.: 2 undergraduate courses in glassworking or permission of the department chairperson. 3-9 Cr. F, S.
- 689. Glassworking II.** Continued advanced work in glassworking. Prereq.: 688. 3-9 Cr. F, S.
- 690. Special Areas—Visual Arts (Topical).** Experiences in special areas of the visual arts. Credits and meetings by arrangement. 1-4 Cr. May be repeated with different topics to max. of 9 Cr. DEMAND.
- 696. Supervision of Elementary School Art.** Methods and practices of supervision in relation to art programs in the elementary school. Prereq.: 290, 390, 490. 3 Cr. DEMAND.
- 698. Creative Work.** 3-9 Cr. F, W, S, SUM.
- 699. Thesis.** 3-9 Cr. F, W, S, SUM.

Biological Sciences (BIOL)

262 MATHEMATICS AND SCIENCE CENTER/255-2039

Chairperson: John McCue

Graduate Faculty: Clapp, Collins, Cronn, Ezell, Grewe, R. Gundersen, Haukoos, Hopkins, Hopwood, V. Johnson, Knutson, Kramer, S. Lewis, Lindstrom, McCue, Mork, Peck, D. G. Peterson, C. Pou, Schrank, Torrence, Williams

M.A./M.S. Degree Programs in Biology: These programs are designed for both full-time and part-time students. Completion of an M.A. program requires attendance in day-time courses; some required courses may be offered in the evening and/or summer quarter. An M.S. program can be completed through evening instruction and summer quarter attendance.

MASTER OF ARTS

The applicant should have earned a minimum of 48 credits in biology and 12 credits in chemistry before admission to this program. In some cases it may be necessary for the student to complete additional prerequisite undergraduate work. At least 15 credits required in the major program in courses in which enrollment is limited to graduate students. A student may elect an emphasis in one of the following areas: Botany, Ecology, Entomology, Fisheries, Genetics, Ichthyology,

Immunology, Limnology, Microbiology, Ornithology, Parasitology, Physiology, or Wildlife Management. A minimum of 18 credits (which may include BIOL 600, 601, 603, 699) in one of the above areas must be completed to declare an emphasis. All students must successfully complete a departmental final written examination. Guidelines for the steps required to complete this degree are available in the biology office. Students are encouraged to obtain this information no later than the first quarter of enrollment.

Plan A, 45 Cr. (Thesis)

- I. Courses in Biological Sciences: Min., 30 Cr.
 - A. Prescribed: Min., 15 Cr. in courses such as BIOL 600, 601, 603, 630, and 699 to include:
BIOL 630 Seminar in Biology (Topical), Min., 3 Cr.
BIOL 696 Research Reporting, 3 Cr.
BIOL 699 Thesis, 6-9 Cr.
 - B. Electives: Min., 15 Cr. must be earned in approved biology courses other than those listed above.
- II. Related Fields: Max., 15 Cr. may be earned in approved related fields.
- III. Satisfactory completion of a departmental written examination.

Plan B, 52 Cr. (Non-thesis)

- I. Courses in Biological Sciences: Min., 37 Cr.
 - A. Prescribed: Min., 9-12 Cr. in courses such as BIOL 600, 601, 603, 630 to include:
BIOL 603 Research in Biology (Topical), Min., 3 Cr.
BIOL 630 Seminar in Biology (Topical), Min., 3 Cr.
BIOL 696 Research Reporting, 3 Cr.
 - B. Electives: Min., 25 Cr. must be earned in approved biology courses other than those listed above.
- II. Related Fields: Max., 15 Cr. may be earned in approved related fields.
- III. Satisfactory completion of a departmental written examination.

MASTER OF SCIENCE

The applicant must have completed an undergraduate teacher education program from an accredited teacher preparation institution and must have completed a minimum of 48 undergraduate credits in biology. In some cases it may be necessary for the student to complete additional prerequisite undergraduate work. At least one-half of the Master of Science degree program must be earned in courses in which enrollment is limited to graduate students. Plan A and B students must successfully complete a comprehensive final written examination.

Plan A, 45 Cr.; Plan B, 48 Cr.

- I. Research: Min., Plan A, 9-12 Cr.; Plan B, 3 Cr.
BIOL 696 Research Reporting, 3 Cr.
or
ED 615 Introduction to Research, 3 Cr.
BIOL 699 Thesis, 6-9 Cr. (Plan A only)
- II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.
Credits to be selected with major adviser.
- III. Professional Education: Min., Plan A or B, 9 Cr.
Consent of secondary education adviser.
- IV. Electives: Min., Plan A, 3-6 Cr.; Plan B, 12 Cr.
- V. Satisfactory completion of a comprehensive final written examination

Plan C, 54 Cr.

- I. Research: Min., 3 Cr.
BIOL 603 Research in Biology (Topical), 3 Cr.
- II. Major: Min., 24 Cr.
Credits to be selected with major adviser.
- III. Educational Foundations: Min., 6 Cr.
Consent of secondary education adviser.
- IV. Electives: Min., 6 Cr.
Credits to be selected from major, related or cognitive fields, general studies, or statistical methods.
- V. Applications and Implementation: Min. 15 Cr.
- VI. Candidates are required to complete successfully a final exam, oral and/or written, covering the materials included in a professional folio to be developed as sanctioned by the adviser. The examination will be conducted by two members of the Department of Biological Sciences and one member from outside the department.

PERMANENT WORKSHOP DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post baccalaureate students. Please refer to page 27 to determine the maximum number of workshop credits which may be applied to graduate degrees.

576. Workshop: Field Biology of the Boundary Waters Canoe Area and Quetico. Backpacking and canoeing in the BWCA and Quetico. Forest ecology, flora, fauna, past and present wilderness and nonwilderness uses. Prior approval by instructor required. (Ten to eleven instructional days in the field.) Extra fees. 4 Cr. SUM.

COURSE DESCRIPTIONS

504. Protozoology. Taxonomy, ecology, physiology, economic importance of the protozoa. Lab. Prereq.: 203. 4 Cr. DEMAND.

505. Radiation Biology. Introduction to radiation, laws governing its use, medical uses, and its effects on humans. Lab. Prereq.: 201, CHEM 201 or 215. 4 Cr. W.

506. Taxonomy of Grasses and Grasslike Plants. Collection and identification of grasses and grasslike plants; mainly of the Poaceae, Cyperaceae and Juncaceae families. Lab. Prereq.: 343 or 345. 4 Cr. SUM, ALT.

508. Cell Biochemistry and Physiology. A continuation of cell biology (BIOL 303) with an emphasis on biochemic and physiologic regulation of eukaryotic cells and tissues. Also discussions of newsworthy advances in this area. Prereq.: 303, CHEM 251. 4 Cr. S.

509. Biological Techniques. Collection, preparation, and display of biological materials. Lab. 2 Cr. S.

511. Human Heredity. Fundamentals of inheritance; genetic disorders; medical, social and legal aspects; genetic counseling. Not applicable to biology M.A. program. 4 Cr. W, S.

512. Biology of Human Aging. Study and discussion of changes in the physiology of biological processes at the organism, organ, cell and subcellular levels. Students will prepare paper on selected topic in area of biology of human aging. 3 Cr. S.

513. Electron Microscope Techniques. Specimen preparation, mechanics and operation of the transmission and scanning electron microscopes. Lab. Prereq.: 303. 4 Cr. W, S.

514. Applied Instrumentation in the Biological Sciences. The application of instrumentation in monitoring, quantifying and isolating biological entities. Lab. Prereq.: 332, 344, CHEM 251. 4 Cr. F, W.

515. Aquarium Science. Setting up and maintaining aquaria; testing and trouble shooting; nutrition and feeding; infections and infestations. 1 Cr. DEMAND.

516. Scanning Electron Microscopy. Theory and operation of the scanning electron microscope and associated instrumentation including the critical point dryer, vacuum evaporator, sputter coater, and x-ray analysis spectrometer. This course is designed to demonstrate applications of the SEM in biological sciences, earth sciences, engineering and high technology. Lab. 4 Cr. W.

519. Wildlife Parasitology. Host-parasite interactions, techniques for the collection, identification, and preservation of specimens. Lab. Prereq.: 201, 203. 4 Cr. DEMAND.

520. Seminar: (Topical). Lectures and discussions on selected topics. May be repeated to a max. of 6 Cr. 1-4 Cr. F, W, S, SUM.

521. Practicum: (Topical). Supervised experience in selected areas such as laboratory management, greenhouse management, animal room management, aquarium management, museum/herbarium curator. Department approval required for enrollment. May be repeated to a max. of 4 Cr. 1-4 Cr. F, W, S, SUM.

522. Ichthyology. The systematics, anatomy, physiology, and natural history of fishes, with special emphasis on local freshwater forms. Lab. Prereq.: 203. 4 Cr. S.

523. Nature Study for Teachers. Classroom and field techniques useful in the identification of living organisms and the study of biotic and abiotic environmental factors. Prereq.: 326 or consent of instructor. 3 Cr. SUM.

524. Common Plants of Minnesota. Introduction to the common plants of Minnesota, their recognition and habitats. Not applicable to biology M.A. program. Field trips. 4 Cr. SUM.

525. Common Animals of Minnesota. Recognition, habitats, and interrelationships of selected Minnesota animals. Not applicable to biology M.A. programs. Lab. 4 Cr. S.

526. Herpetology. The systematics, anatomy, physiology, and natural history of reptiles and amphibians. Lab. Prereq.: 203. 4 Cr. DEMAND.

529. Marine Biology. The ocean and marine organisms; their relation to humans. Prereq.: 301. 3 Cr. W ALT.

530. Medical Genetics. Genetic principles and applications in the medical field. Prereq.: 332. 3 Cr. W.

532. Molecular Genetics. Biochemical approach to inheritance. Lab. Prereq.: 332. 3 Cr. S.

- 533. Aquatic Plants.** Taxonomy and ecology of aquatic plants, including vascular plants, mosses and selected algae and fungi. Lab. Prereq.: 301. Summer collection recommended. 4 Cr. DEMAND.
- 534. Freshwater Algae.** Morphology, taxonomy and ecology of algae of lakes, ponds, streams, bogs and soils. Lab. Prereq.: 202. 4 Cr. F.
- 535. Comparative Animal Physiology.** Comparative study of functional mechanisms in the various phyla. Prereq.: 203, 303, CHEM 215. 3 Cr. S ALT.
- 536. Plant Physiology.** An introduction to whole plant growth and development, including aspects of water relations, mineral nutrition, transport, photomorphogenesis, natural and synthetic plant growth regulators, vegetative and reproductive growth. Prereq.: 202, 303, CHEM 215 or 201. 4 Cr. S.
- 537. Plant Morphology.** Survey of plant kingdom with emphasis on structure and form of primitive plants. Lab. Prereq.: 202. 4 Cr. W ALT.
- 538. Freshwater Invertebrates.** Natural history, collection, and classification of local species. Lab. Prereq.: 341. 4 Cr. S ALT.
- 539. General Parasitology.** Animal parasites and their relation to diseases of humans and other animals. Lab. Prereq.: 201. 4 Cr. S.
- 540. Mycology.** Structure, development, and identification of fungi with emphasis on species of economic importance. Lab. Prereq.: 202. 4 Cr. F ALT.
- 541. Plant Ecology.** Relations between plants and their environment; field studies of plant communities and succession. Lab. Prereq.: 301, one course or concurrent registration in 343 or 345. 4 Cr. F.
- 542. Embryology.** Prenatal development of human body; laboratory emphasis on chick and pig. Lab. Prereq.: 203. 4 Cr. W.
- 543. Animal Behavior.** Behavior of animals as interpreted through comparative studies and experimentation. Lab. Prereq.: 203 or consent of instructor. 4 Cr. W.
- 545. Medical Microbiology I.** Morphology, classification, techniques of culture and rapid identification of pathogenic microorganism. Lab. Prereq.: 344. 4 Cr. F, S.
- 546. Immunology.** Basic introduction to humoral and cellular immunology. Includes assay procedures, induction and regulation of responses, as well as immunopathology. 3 Cr. F, W.
- 547. Laboratory Methods in Immunology.** Antibody detection and estimation (qualitative and quantitative techniques), cellular immunity procedures. Lab. Prereq.: 446-546 or concurrent enrollment. 2 Cr. W.
- 548. Limnology.** Lakes and streams, their physical environment, plant and animal life and dynamic interrelations. Lab. Prereq.: 301, CHEM 216. 4 Cr. F.
- 549. Limnology of Lakes and Watersheds.** The study of lakes as functional units of watersheds, assessment methods, trophic status, and management. Lab. Prereq.: 433-533 and/or 434-534, 448-548. 4 Cr. W.
- 550. Limnology of Streams.** Physical, chemical and biological features and dynamic interrelations of flowing water, emphasis on problem solving, sampling and analytical techniques. Lab. Prereq.: 438-538 and 448-548. 4 Cr. S.
- 551. Animal Ecology.** Distribution, life histories, habitat requirements, and environmental interrelations of vertebrates and invertebrates. Lab. Prereq.: 301 and one of the following: 339, 341, 347, 422-522, 426-526. 4 Cr. S ALT.
- 552. Water and Sewage Microbiology.** Microbiology of water. Purification of water and treatment of sewage. Lab. Prereq.: 344, CHEM 251. 4 Cr. DEMAND.
- 553. Invertebrate Zoology.** Classification, phylogeny, anatomy, physiology, and natural history of invertebrates. Lab. Prereq.: 203. 4 Cr. W ALT.
- 554. Wildlife Management.** General principles of wildlife management with detailed studies of selected species. Lab. Prereq.: 301. 4 Cr. F.
- 555. Physiology of Bacteria.** Study of growth, metabolism and differentiation of bacteria. Lab. Prereq.: 303, 344, CHEM 251. 4 Cr. S.
- 556. Methods for Teaching Junior High School Science.** Modern approaches to teaching science in junior high school. Not applicable to biology M.A. program. Lab. 2 Cr. F, W.
- 557. Methods and Materials for Teaching Biology.** Modern approaches to teaching high school biology in classroom and laboratory; including materials of Biological Sciences Curriculum Study. Not applicable to biology M.A. program. Lab. 2 Cr. F, W.
- 558. Plant Anatomy.** The structure, organization and development of the plant body of higher plants. Lab. Prereq.: 202. 4 Cr. W ALT.
- 559. Biological Evolution.** History, evidence, and processes of evolution. Prereq.: 332. 3 Cr. W.
- 560. Evolution and Sociobiology.** Scientific theories and processes of biological evolution and the origin of life. The role of genetics and evolution in animal behavior; principles of sociobiology. 4 Cr. W ALT.
- 562. Medical Entomology.** Study of arthropods of medical importance with emphasis on vector biology and disease ecology. Lab. Prereq.: 203. 2-4 Cr. DEMAND.
- 563. Endocrinology.** A study of the morphology and physiology of the endocrine glands in

physiological communication and regulation. Lab. Prereq.: 464-564, 465-565. 4 Cr. S.

564. Human Anatomy and Physiology I. Structure and metabolic activity of organ systems including muscular, skeletal, nervous and integumentary. Lab. Prereq.: 303. 4 Cr. F, W, SUM.

565. Human Anatomy and Physiology II. Structure and metabolic activity of organ systems including circulatory, respiratory, digestive, urinary, endocrine and reproductive. Lab. Prereq.: 464-564. 4 Cr. W, S, SUM.

566. Immunohematology. The immunology of blood groups and its application to blood transfusions, hemolytic disease of the newborn, and detailed blood group typings. Lab. Prereq.: 446-546. 3 Cr. W.

567. Hematology I. Blood cell formation and function; tests and procedures pertinent to clinical hematology. 2 Cr. F.

568. Water Quality Management. In a quality control lab. setting polluted water from lakes and streams will be tested by public health standard methods for microorganisms, nutrient chemicals, toxicity to fish, and the algal assay nutrient concentration and bioavailability tests. Lab. Prereq.: CHEM 215. 4 Cr. W.

569. Soil Microbiology. The role of micro-organisms in the soil, their identification, culture and environmental significance. Lab. Prereq.: 303, 344. 4 Cr. DEMAND.

570. Fisheries Biology. Collecting and sampling, description of population characteristics, computer-assisted estimation of population parameters, fundamentals of management, and effects of water quality. Lab. Prereq.: 301. 4 Cr. F.

571. Medical Microbiology II. Taxonomy, morphology, cultural and biochemical activities, and pathogenesis of microorganisms; basic mycology and virology; emphasis on humans as required for medical technology. Prereq.: 445-545. 3 Cr. F.

572. Biotechnology I. Introduction to the basic theory and techniques involved in biotechnology and recombinant DNA work. Lab. Prereq.: 414, 432, 484, CHEM 353. 4 Cr. F.

573. Biotechnology II. Theory and advanced techniques in gene isolation and identification. Lab. Prereq.: 472. 4 Cr. W.

574. Fall Ornithology. Migration patterns, fall plumage, feeding behavior, population studies. Lab. Prereq.: 347. By permission only. 4 Cr. F ALT.

575. Environmental Biology. Readings and discussions relating to environmental problems as they concern humans and other organisms. Designed for students with little or no background in biology. Biology majors by permission only. 4 Cr. DEMAND.

577. Biology Topics. Selected topics in biology for teachers of science. May be repeated to a max. of 8 Cr. Lab. 1-4 Cr. DEMAND.

580. Economic Botany. Biology of plants and plant products which are useful to humans. Prereq.: 202, 332. 3 Cr. DEMAND.

584. Virology. Structure, life cycles, classification, virus-host relationships, lysogeny transformation, tumor induction. Prereq.: 303, 344. 3 Cr. W.

585. Laboratory Methods in Virology. Techniques of virus isolation, production, purification, enumeration and experimentation. Lab. Prereq.: 484-584 or concurrent enrollment. 2 Cr. W.

586. Pathophysiology. Various abnormalities of human physiology; covering such abnormalities as seen in immunology, bacterial and viral invasion and disorders of various systems. Prereq.: 344, 465-565. 4 Cr. DEMAND.

587. Hematology II. Hematologic diseases, pathological findings and their interpretations, and introduction to coagulation chemistry. Prereq.: 467-567. 2 Cr. W.

589. Paleobiology. Field and laboratory study of living and fossil species and geological aspects of the environment. Lab. Prereq.: 203, ESCI 284 or consent of instructor. 4 Cr. F ALT.

590. Selected Topics in Biology. Designed for intensive study in a special biology topic. Topic will be announced in class schedule. May be repeated to a max. of 8 Cr. 1-4 Cr. DEMAND.

591. Field Studies in Biology (Topical). Selected field trips to study the flora, fauna and ecology of native habitats such as the Grand Canyon, Florida Keys, etc. Arranged instructional sessions may be required before or after the trip. Extra fees. By permission only. May be repeated with adviser permission to a max. of 12 Cr. 1-4 Cr. DEMAND.

597. History of Biology. Origin and development of major ideas of biological thought. 3 Cr. DEMAND.

598. The Nature of Biological Science. Clarification of terms in biology, identifying basic assumptions, the basis and origins of biology, the interactions of society and biology, problems and hopes of applied biology. 3 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

601. Readings in Biology (Topical). 1-4 Cr. F, W, S, SUM.

602. Modern Biological Concepts. Survey course in which modern concepts in physiology, genetics, and ecology are developed through selected laboratory experiences, reading, and discussion. Not applicable to biology M.A. program. 3 Cr. S.

603. Research in Biology (Topical). 1-8 Cr. May be repeated; a max. of 8 Cr. may be applied toward a master's degree program. F, W, S, SUM.

610. Special Topics in Biology. A lecture or a lecture/laboratory course in a special area of the

- biological sciences. Prereq. may be required. May be repeated to a max. of 12 Cr. 1-4 Cr. DEMAND.
- 620. Advanced Biology (Topical).** Advanced course in areas such as parasitology, virology, immunology, genetics, botany, ecology, entomology, microbiology, zoology, physiology, limnology. Prereq.: an undergraduate course in the area. May be repeated with different subject areas to a max. of 12 Cr. 2-4 Cr. DEMAND.
- 630. Seminar in Biology (Topical).** 1-4 Cr. May be repeated to a max. of 9 Cr. F, W, S.
- 647. Advanced Ornithology.** Functional morphology and breeding biology of birds. Lab. Prereq.: 347. 4 Cr. S.
- 666. Biogeography.** Past and present distribution of biotic communities in relation to environmental and historic factors. Prereq.: 441-541. 3 Cr. DEMAND.
- 696. Research Reporting.** Research analysis and reporting. Students will be graded on an S/U basis. 3 Cr. W.
- 699. Thesis.** 6-9 Cr. F, W, S, SUM.

Business Computer Information Systems (BCIS)

210 BUSINESS BUILDING/255-2174

Chairperson: Tor Guimaraes

Graduate Faculty: Guimaraes, Heath, D. Krueger, M. Lu, Robinson, Song

Also see M.B.A. requirements, pages 31-33.

COURSE DESCRIPTIONS

- 538. International Business Seminar.** Designed to serve as an integrated capstone for international business. It includes understanding of the problems faced by international business, policy and decision-making processes as well as control and evaluation of international business. Prereq.: MKGB 427; MGMT 470. 4 Cr. S.
- 540. Business Statistics III.** Review of statistical inference, analysis of variance with two or more variables of classification, multiple regression and correlation, analysis of covariance and non-parametric methods. Prereq.: 241. 4 Cr. W.
- 543. Data Base Concept and Development.** Investigation and application of data base concepts including data base administration, data base technology, and selection and acquisition of data base management systems. Application program development in a data base environment with an emphasis on loading, modifying, and querying the data base using a host language. Prereq.: 251, 350 or consent of instructor. 4 Cr. F, DEMAND.
- 545. Applied Software Development Project.** Application of computer programming and system development concepts, principles and practices to a comprehensive system development project. A team approach is used to analyze, design, and document realistic systems of moderate complexity. Use of project group dynamics in the solution of information systems problems. Prereq.: 251, 351, 543. 4 Cr. F, S.
- 550. Information Systems Management.** Organizational structure of a management information system; information systems management; personnel selection, training, motivation and evaluation; acquisition, analysis, administration and control of hardware and software; managerial control of MIS; computer's impact on administration and control of MIS. Prereq.: 351 or consent of instructor. 4 Cr. S.
- 551. Telecommunication and Distributed Data Processing.** Introduction to data communication and teleprocessing, centralized, decentralized, and distributed systems; impact of distributed systems on hardware, software, data, procedures, and personnel. Prereq.: 351 or consent of instructor. 4 Cr. S.
- 554. Decision Support Systems.** Analysis of information support systems for semi-structured tasks for management decision making. Framework of decision support system. Design, implementation, and evaluation of decision support systems. Prereq.: 150, 241. 4 Cr. F, DEMAND.
- 555. Business Research.** Fundamentals of research methodology, including planning, organizing, and executing a research project; sampling techniques; basic concepts and techniques in the design of experiments; interpretation of data; art and strategy of presenting findings. Prereq.: 540. 4 Cr. DEMAND.

556. Linear Programming. Formulation of linear programming problems, simplex methods, dual simplex, post-optimality analysis and parametric linear programming. Introduction to integer linear programming, cutting plane algorithm, branch and bound algorithms and their applications. Prereq.: 341 or consent of instructor. 4 Cr. S.

559. Topics in Information Systems. Recent developments in concepts, theory, practices in the analysis and design of management information systems. Prereq.: 351 or consent of instructor. 4 Cr. W.

Business Education and Office Administration (BEOA)

204 BUSINESS BUILDING/255-3248

Chairperson: Marilyn Stinson

Graduate Faculty: Karjala, Kellerman, Little, Pagel, Stinson

MASTER OF SCIENCE

Admission Requirements.

An applicant for admission to the Master of Science in Business Education must meet the following requirements:

1. Hold a baccalaureate degree from an accredited college or university.
2. Hold a Minnesota Vocational Teacher Certificate in Business Education or have completed an undergraduate teacher education program from an accredited teacher preparation institution.
3. Have an acceptable score on the Graduate Management Admission Test (GMAT).
4. Show evidence of undergraduate scholarship.
5. Have completed foundation courses in business.
6. At least half of the program must be earned in courses in which enrollment is limited to graduate students.

This program is designed for both full-time and part-time students. Full-time students must expect to complete part of their course load in evening classes.

Plan A, 45 Cr.; Plan B, 48 Cr.; Plan C, 54 Cr.

- I. Research: Min., Plan A, 9-15 Cr.; Plan B, 3-6 Cr.; Plan C, 3 Cr.
ED 615 Introduction to Research, 3 Cr. (or equivalent course)
BEOA 699 Thesis, 6-9 Cr. (Plan A only)
- II. Major: Min., Plan A, 18 Cr.; Plans B and C, 24 Cr.
Credits to be selected with approval of major adviser and should include BEOA 606.
- III. Professional Education: Min., Plans A and B, 9 Cr.; Plan C, 6 Cr.
Credits to be selected with approval of professional education adviser.
- IV. Electives: Min., Plan A, 3-6 Cr.; Plan B, 9 Cr.; Plan C, 6 Cr.
- V. Educational Applications: Min., 15 Cr. (Plan C only)
Credits to be selected with approval of major adviser.

PERMANENT WORKSHOP DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to page 27 to determine the maximum number of workshop credits which may be applied to graduate degrees.

515. Workshop: Word Processing I—Machines. An in-depth training on word processing equipment for the modern office using at least two brands of equipment plus word processing software for the IBM Personal Computer. Prereq.: typewriter competency. 3 Cr. W, DEMAND.

516. Workshop: Word Processing II—Theory. This course will provide the teacher of word processing with a basic background in office systems, trends and future developments in office systems involving information processing. 3 Cr. S, DEMAND.

COURSE DESCRIPTIONS

502. Office Management. Problems in planning and directing functions of business or professional offices; executive duties and responsibilities of office manager and private secretary; supervision of employees. 4 Cr. F.

503. Office Environmental Relationships. Work and social relationships in the office; communications; needs and interpersonal attitudes; employer-employee relationships; survey of research in office environments. 4 Cr. S.

504. Office Systems Management. Development of skill in the establishment of specialized office systems: word processing, reprographics, communication, records systems, and how they interrelate with computer systems; experiences in designing and analyzing office systems. Prereq.: 402 and BCIS 350. 4 Cr. W.

505. Philosophy of Vocational Education. History, purpose, organization, philosophy of vocational education. 3 Cr. F, S.

506. Methods and Curriculum for Vocational Programs. Instructional methods, materials, and curriculum in vocational programs. 3 Cr. W.

507. Adult Education Programs. Planning, administering, supervising, evaluating adult programs. Selecting, training adult education instructors. 3 Cr. DEMAND.

508. Coordination Techniques. Guidance, selection, placing students in training stations; job adjustments; developing training programs. 3 Cr. S.

509. Organization and Administration of Vocational Programs. Principles, practices; local, state, federal regulations; reporting and evaluation; club programs; curriculum; affiliations. 3 Cr. DEMAND.

511. Advanced Topics in Records Management. Problems in creation, use, maintenance, storage, and disposition of records. Emphasis on records management as an administrative service which includes the management of forms, reports, correspondence and microfilming. Prereq.: 310 or consent of instructor. 4 Cr. S.

514. Office Management II. Advanced analysis and problem-solving techniques related to administrative support functions. Prereq.: 402-502 or consent of instructor. 4 Cr. DEMAND.

517. Communication in Business Organizations. Development of managerial communication skills; improvement of report writing and business letter writing; communication by organizations in the international business environment. Prereq.: 309 or consent of department chairperson. 4 Cr. F, S.

519. Personal Finance. A study of banking, budgeting, credit, casualty and life insurance, investments and annuities. Also Federal income tax regulations, estate planning and wills from a personal or consumer's point of view. 4 Cr. F.

538. International Business Seminar. This course is designed to serve as an integrated capstone for international business. It includes understanding of the problems faced by international business, policy and decision-making processes as well as control and evaluation of international business. Prereq.: MGMT 470, 473; MKGB 427. 4 Cr. S.

COURSES FOR GRADUATE STUDENTS ONLY

601. Foundations in Business Education. Principles, philosophy, and curriculum development in business education. 3 Cr. SUM ALT.

602. Improvement of Instruction in Office Subjects. Instructional materials, methods and procedures, standards of achievement, and other classroom problems. 3 Cr. SUM ALT.

603. Improvement of Instruction in Accounting. Objectives, courses of study, materials, teaching techniques and innovations for teaching bookkeeping and accounting. 3 Cr. SUM ALT.

604. Improvement of Instruction in The Basic Business Subjects. Objectives, courses of study, materials, teaching techniques, evaluation, curriculum, related classroom problems. 3 Cr. SUM ALT.

605. Seminar. Discussion and evaluation of readings, current research, and teaching problems in business education. 1-3 Cr. May be repeated with different topic. Max. of 9 Cr. DEMAND.

606. Analysis of Research in Business Education. Analysis and application of formal and informal research affecting business teachers. Prereq.: ED 615. 3 Cr. SUM ALT.

608. Administration and Supervision of Business Education. Problems of teacher, department head, or supervisor beyond those involved in classroom teaching. Equipment and layout, budget making, publicity, curriculums, selection of textbooks, employment, rating, and related problems. 3 Cr. SUM.

616. Consumer Education. An examination of factors which impact on the consumer. A consideration of consumed options which creatively influence the direction of these factors. 4 Cr. DEMAND.

699. Thesis. 3-9 Cr. F, W, S, SUM.

Chemistry (CHEM)

358 MATHEMATICS AND SCIENCE CENTER/255-3031

Chairperson: Richard James

Graduate Faculty: Arndts, Carpenter, Cooper, Dendinger, James, Kennedy, Magnus, McKenna, McMullen, Munson, Nickles, Weiskopf, Williams

This department currently does not offer a major program. Service courses for other graduate programs are offered in daytime and summer schedules.

COURSE DESCRIPTIONS

For courses with a laboratory, the number of lecture hours (listed first) and laboratory hours per week are given in parentheses following the course title.

515. Radiochemistry. Nuclear stability and structure; decay systematics and energetics; interactions of radiation with matter; nuclear energy; detection, measurement and characterization of radiation; application to chemical and biochemical problems. Lab. Prereq.: 216, basic calculus desirable. 4 Cr. F.

525, 526, 527. Physical Chemistry. Application of fundamental laws and theoretical principles to atomic and molecular structure, gases, liquids, solids, solutions, phase equilibrium, chemical reactions (equilibrium and kinetics), and electrochemical processes; to understand the macroscopic in terms of molecular behavior. Prereq.: 325, PHYS 232, 233, MATH 243. 3 Cr. per quarter. 525-F, 526-W, 527-S.

528, 529, 530. Physical Chemistry Laboratory. (0, 3) These are laboratory courses to complement the physical chemistry lecture sequence. A quantitative measurement of properties and phenomena of chemical interest and their interpretation by use of chemical principles. Prereq.: 525, 526, 527 or concurrent registration. 1 Cr. 528-F, 529-W, 530-S.

534. Advanced Inorganic Chemistry I. (3, 2) Development of the concepts of inorganic chemistry; electronic structures of atoms; crystal structure; chemical bonding including molecular orbital theory; coordination compounds. Lab. Prereq. or concurrent registration: 525, or consent of instructor. 4 Cr. F.

535. Advanced Inorganic Chemistry II. Application of the concepts of inorganic chemistry as applied to chemical elements and compounds. Further work in coordination chemistry including the ligand field theory. Prereq.: 534. 4 Cr. W.

540. Instrumental Analysis. (3, 6) Major instrumental methods of chemical analysis including spectroscopic, electrometric, and chromatographic methods. Prereq.: 425, 426, or concurrent registration or consent of instructor. 5 Cr. W.

550. Qualitative Organic Analysis. (1, 12) Identification of several simple and mixed organic compounds by physical and organic qualitative methods. Lab. Prereq.: 293, 540. 4 Cr. S.

553. Biochemistry I. (3, 4) Structures, properties, and function of biomolecules; proteins and amino acids, nucleic acids, carbohydrates, lipids, vitamins. In addition, enzymes and enzyme mechanisms are covered. Prereq.: 252 or 292, or consent of instructor. 4 Cr. F.

554. Biochemistry II. (3, 0) Basic concepts of bioenergetics and metabolic processes. Major energy producing and energy storage pathways of carbohydrates, lipids, and amino acids, together with the interrelationships and control of these pathways. Prereq.: 353, 453, or 553, or consent of instructor. 3 Cr. W.

555. Biochemistry III. (3, 3) Basic concepts involved with the biosynthesis and control of various biochemical molecules, including amino acids, proteins, nucleic acids. Prereq.: 454 or 554, or consent of instructor. 4 Cr. S.

556. Methods and Materials for Teaching Sciences. Modern approaches to teaching science in junior or senior high school. Integrated lab. 2 Cr. F, W.

558. Methods and Materials for Teaching Chemistry. Modern approaches to teaching of high school chemistry in classroom and laboratory. Integrated lab. Prereq.: 556 or concurrent registration. 2 Cr. W.

560-569. Selected Topics in Chemistry. Non-sequence courses designed for intensive study of a special topic. Topic will be announced in class schedule. Departmental approval required for enrollment. 1-4 Cr. DEMAND.

572. Advanced Organic Chemistry. Topics such as condensations, rearrangements, conservation of orbital symmetry, polymers, benzenoid and non-benzenoid aromaticity. Prereq.: 293, 534, or consent of instructor. 4 Cr. S ALT.

581. Chemical Thermodynamics. Concepts of both classical and modern thermodynamics applied to problems encountered in chemistry. Prereq.: 526. 4 Cr. S ALT.

590. Seminar. Lectures, readings, discussions on selected topics. May be repeated. 1 credit per quarter to a max. of 4 Cr. F, W, S.

COURSES FOR GRADUATE STUDENTS ONLY

610. History of Chemistry. The origin and historical development of chemical concepts. Prereq.: chemistry background or consent of instructor. 3 Cr. DEMAND.

Child and Family Studies (CFS)

B118 EDUCATION BUILDING/255-3124

Director: Pamm Mattick

Graduate Faculty: Blaska, Mattick, Mayala, Palm

MASTER OF SCIENCE: Child and Family Studies

Three Master of Science Child and Family Studies degree options; Early Education, Administration, and Special Needs Children, are offered within this program.

Child and Family Studies: Early Education, is a degree that is primarily for those persons who would like to gain advanced knowledge and skills about curriculum, methods and materials, and teaching/learning styles specifically pertaining to young children. Both Plan A and Plan B options are available to students who seek this degree.

Child and Family Studies: Administration, is a degree that has been designed for persons with experience in working with young children and who would like to assume administrative or director roles in early childhood programs. Both Plan A and Plan B options are available to students who seek this degree.

Child and Family Studies: Special Needs Children is a degree that has been jointly developed with the Special Education Department. This degree is for those persons who would like to assume teaching positions in programs for young children with handicapping conditions or in programs working with parents of such children. Either Plan A or Plan B options are available.

Applicants for these degrees must meet the requirements for admission to the Graduate School at St. Cloud State University. It is anticipated that persons may come with a variety of background training and experience. It is desirable, but not required, that students have completed an undergraduate degree in a related major area.

The CFS program is designed with the intent to individualize instruction as much as possible to allow for differences in students' backgrounds, interests and abilities. The students will be expected to demonstrate their understandings and skills in numerous field contacts. Much course work will be taken as concurrent blocks of lecture and field experiences.

GRADUATE TEACHER LICENSURES

Programs leading to recommendation for licensure as a nursery school teacher (pre-kindergarten) or as a special education: early childhood teacher are available. The Parent Education Vocational Teaching License can also be obtained. It is possible to combine course work and to receive both licenses. Students interested in licensure at the graduate level should write to: Director, Center for Child and Family Studies, Education Building, St. Cloud State University, St. Cloud, MN 56301. Students who wish to pursue licensure, but who do not intend to complete a master's degree should complete an application to graduate school either for the fifth year program or the master's degree program of studies.

Students seeking admission to the Fifth Year Program in Teacher Education/Early Childhood follow the application procedures and the credit requirements listed in the Graduate Bulletin. *The Fifth Year Program requires 45 credits of course work to be selected with graduate adviser approval. The CFS graduate program is designed for both full-time and part-time students. Most courses are offered in the evening with a limited offering of day classes. The graduate summer school offerings typically include courses applicable to teaching licensure.*

DEGREE REQUIREMENTS

Master of Science in Child and Family Studies: Administration

Plan A students complete thesis.

Plan B students write two starred papers in conjunction with selected graduate courses.

Plan A, 46 Cr.; Plan B, 51 Cr.

- I. Research Core: Required: Plan A, 9 Cr.; Plan B, 3 Cr.
Choose from the following courses or equivalent with adviser's approval:
 - ED 602 Evaluation of the School Program, 3 Cr.
 - ED 614 Interpretation of Research, 3 Cr.
 - ED 615 Introduction to Research, 3 Cr.
 - PSY 678 Introduction to Graduate Statistics, 3 Cr.
 - CFS 699 Thesis, 3-6 Cr. (Plan A only)
- II. Child and Family Core: Plan A, 25 Cr.; Plan B, 30 Cr.
 - CFS 521 Developmental Milestones of Children, 3 Cr.
 - CFS 661 Practicum in Development of Young Children, 2 Cr.
 - CFS 522 Parent and Family Studies, 3 Cr.
 - CFS 662 Practicum in Parent and Family Studies, 2 Cr.
 - CFS 531 Development of Infants and Toddlers, 3 Cr.
 - CFS 661 Practicum in Development of Young Children, 2 Cr.
 - CFS 621 Advanced Development of Young Children, 3 Cr.
 - CFS 661 Practicum in Development of Young Children, 2 Cr.
 - CFS 622 Advanced Studies of Parents and Families in Community, 3 Cr.
 - CFS 662 Practicum in Parent and Family Studies, 2 Cr.
- III. Administration Core: Plan A, 12 Cr.; Plan B, 18 Cr.
 - CFS 524 Administration of Early Education, 3 Cr.
 - CFS 674 Field Experience in Administration and Facilitation of Early Childhood Programs, 3 Cr.
 - CFS 605 Issues and Topics in Early Childhood and Family Studies, 3 Cr.

Plan A students choose one and Plan B students choose two from the following list of courses or equivalent with adviser approval:

- MGMF 560 Problems in Personnel Administration, 4 Cr.
- MGMF 572 Financial Institutions, 4 Cr.
- EDAD 650 School Law, 3 Cr.
- EDAD 649 Elementary School Administration, 3 Cr.
- EDAD 604 School Finance, 3 Cr.
- EDAD 617 Foundation of Community Education, 1 Cr.
- EDAD 677 Personnel Administration, 3 Cr.

Master of Science in Child and Family Studies: Early Education

Plan A students complete thesis.

Plan B students write two starred papers in conjunction with selected graduate courses.

Plan A, 46 Cr.; Plan B, 51 Cr.

- I. Research Core: Required: Plan A, 9 Cr.; Plan B, 3 Cr. Choose from the following courses or equivalent with adviser's approval:
 - ED 602 Evaluation of the School Program, 3 Cr.
 - ED 614 Interpretation of Research, 3 Cr.
 - ED 615 Introduction to Research, 3 Cr.
 - PSY 678 Introduction to Graduate Statistics, 3 Cr.
 - CFS 699 Thesis, 3-6 Cr. (Plan A only)
- II. Child and Family Core: Plan A, 25 Cr.; Plan B, 30 Cr.
 - CFS 521 Developmental Milestones of Children, 3 Cr.
 - CFS 661 Practicum in Development of Young Children, 2 Cr.
 - CFS 522 Parent and Family Studies, 3 Cr.
 - CFS 662 Practicum in Parent and Family Studies, 2 Cr.
 - CFS 531 Development of Infants and Toddlers, 3 Cr.
 - CFS 661 Practicum in Development of Young Children, 2 Cr.
 - CFS 621 Advanced Development of Young Children, 3 Cr.
 - CFS 661 Practicum in Development of Young Children, 2 Cr.
 - CFS 622 Advanced Studies of Parents and Families in Community, 3 Cr.
 - CFS 662 Practicum in Parent and Family Studies, 2 Cr.
- III. Early Education Core: Plan A, 12 Cr.; Plan B, 18 Cr.
 - CFS 523 Early Education, 3 Cr.
 - CFS 623 Analysis of Early Education: Curriculum, 3 Cr.
 - CFS 663 Practicum in Early Education, 2 Cr.
 - CFS 560 Field Experiences in Early Education: Student Teaching, 4 Cr.

Plan B students choose one of the following with adviser's approval:

- ED 662 Kindergarten/Primary Education
- CFS 605 Issues and Topics in Early Childhood and Family Studies
- ED 608 Child and Student Rights
- CFS 633 Educational Strategies with Young Handicapped Children

Additional courses may be needed for teaching licensure. Contact your adviser.

Master of Science in Child and Family Studies: Special Needs Children

Plan A students complete thesis.

Plan B students write two starred papers in conjunction with selected graduate courses.

Plan A, 46 Cr.; Plan B, 51 Cr.

- I. Research Core: Required: Plan A, 9 Cr.; Plan B, 3 Cr. Choose from the following courses or equivalent with adviser's approval.
 - ED 602 Evaluation of the School Program, 3 Cr.
 - ED 614 Interpretation of Research, 3 Cr.
 - ED 615 Introduction to Research, 3 Cr.
 - PSY 678 Introduction to Graduate Statistics, 3 Cr.
 - CFS 699 Thesis, 3-6 Cr. (Plan A only)
- II. Child and Family Core: Plan A, 25 Cr.; Plan B, 30 Cr.
 - CFS 521 Developmental Milestones of Children, 3 Cr.
 - CFS 661 Practicum in Development of Young Children, 2 Cr.
 - CFS 531 Development of Infants and Toddlers, 3 Cr.
 - CFS 661 Practicum in Development of Young Children, 2 Cr.
 - CFS 522 Parent and Family Studies, 3 Cr.
 - CFS 662 Practicum in Parent/Family Studies, 2 Cr.
 - CFS 523 Early Education, 3 Cr.
 - CFS 633 Educational Strategies with Young Handicapped Children, 3 Cr.
 - CFS 605 Issues and Topics in Early Childhood, 4 Cr.
 - CFS 560 Student Teaching in Early Education, 4-8 Cr.
- III. Special Needs Core: Plan A, 12 Cr.; Plan B, 18 Cr.
 - SPED 503 Foundations in Special Education I, 3 Cr.
 - SPED 509 Foundations in Special Education II, 3 Cr.
 - SPED 520 Education of Severely and Profoundly Retarded, 3 Cr.
 - SPED 521 Education of Moderately Mentally Retarded, 3 Cr.
 - SPED 508 Developmental Screening and Assessment of Young Children, 3 Cr.
 - SPED 505 Behavior Problems in the Schools, 3 Cr.
 - CFS 683 Practicum in Special Education/Early Childhood, 4 Cr.
 - CDIS 568 Introduction to Children's Language, 3 Cr.

Additional courses may be needed for teaching licensure. Contact your adviser.

PERMANENT WORKSHOP DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to page 27 to determine the maximum number of workshop credits which may be applied to graduate degrees.

502. Workshop: Healthy Families (Part I). Examines the positive characteristics and traits of "healthy" well-functioning families. The term "healthy" refers to the mental well-being of families and not related to diseases or physical ailments. 1 Cr. F, W, S.

503. Workshop: Healthy Families (Part II). Attention will be given to identify the strengths of your own "healthy" system and how that influences your lifestyle choices of today. Prereq.: 502. 1 Cr. F, W, S.

504. Workshop: Birth Order in the Family. Implications of birth order on the family; implications of the family constellation. Prereq.: permission of instructor. 1 Cr. F, W, S.

506. Workshop: Looking at Learning. Seminar to study the structure of subjective experience. Education is considered a meaningful encounter between two persons in which the subjective experiences of both are crucially important. Prereq.: Permission of instructor. 1 Cr. W.

COURSE DESCRIPTIONS

515. Foundations of Early Childhood and Family Education. History of early childhood and family education, philosophy, principles of early childhood and family education emphasizing the relationships of the child, family and community. 4 Cr. DEMAND.

521. Developmental Milestones of Children. Development of normal and exceptional children. Theories of child development, impacts of early experience, developmental assessment

and planning. Prereq.: one undergraduate course in child/human development or equivalent competency. Coreq.: 661 or 671. 3 Cr. F.

522. Parent and Family Studies. Models of parent and family, including special needs, education. Ways to involve parents, methods of parent education, family unit studies. Coreq.: 662 or 672. 3 Cr. W.

523. Early Education. Teaching techniques, curriculum selection and construction, and evaluation of instructional materials appropriate for early education programs. 3 Cr. F.

524. Administration of Early Education. The course is designed to give students the skills necessary to direct and operate programs in early childhood education. Current legislation is studied. 3 Cr. DEMAND.

525. Methods of Parent and Family Education. Overview of various methods and curricula used in the field of parent and family education, including theories about adult learners and group process, review, and evaluation of existing programs and curricula, and the development and adoption of parent and family education curricula for specific populations. 3 Cr. DEMAND.

531. Development of Infants and Toddlers. This course focuses on developing a profile of young children in the first three years of life. A major philosophy of this class is to function under the assumption that the infant is competent. The roles and actions of caregivers will be discussed in relation to infant/toddler interaction. Evaluating and assessing the special needs of infants/toddlers is also a major component of this class. Prereq.: 521. Coreq.: 661 or 671. 3 Cr. S.

560. Student Teaching in Early Education. Supervised teaching in Head Start program, home training programs, nursery schools, public school programs and other settings. Required for licensure in Pre-kindergarten. Coreq.: 523. X grading option. 4-8 Cr. S, SUM.

COURSES FOR GRADUATE STUDENTS ONLY

605. Issues and Topics in Early Childhood and Family Studies. A variable content course designed to address specialized areas of study related to early childhood education, child development, parent education, parenting practices, legislation, child advocacy or other topics which are of current concern to faculty and/or students. 1-6 Cr. DEMAND.

621. Advanced Development of Young Children. An in-depth study of developmental milestones, children at risk, pediatric experiences, and the effects of children's development on others. Prereq.: 521. May be taken twice on approval of adviser. 1-6 Cr. DEMAND.

622. Advanced Studies of Parents and Families in the Community. In-depth study of home/community coordination and education. Development of skills and sensitivities for dealing with families, family based child care, and research and development of parenting programs. Prereq.: 522. May be taken twice with approval of adviser. 1-6 Cr. F, S.

623. Analysis of Early Education. Evaluation, planning, designing learning environments, equipment/facilities, teaching roles, socialization of children in early childhood education. Prereq.: 523. May be taken twice on approval of adviser. 1-6 Cr. W, SUM.

633. Educational Strategies with Young Handicapped Children. Designed to review knowledge of basic concepts of individualized education for handicapped children and provide understanding of curriculum, materials, and methodology necessary for providing educational services to young handicapped children. 3 Cr. DEMAND.

661. Practicum in Development of Young Children. Supervised practicum in early childhood programs. Will have experiences of observing and assessing, participating with and planning for children ages 0-8 years. Must be taken at same time as 521 or 621. 1-6 Cr. DEMAND.

662. Practicum in Parent and Family Studies. Supervised practicum working with parents and families participating in early childhood programs. Must be taken at same time as 522 or 622. 1-6 Cr. DEMAND.

663. Practicum in Early Education. Supervised practicum in early childhood programs. Will have experiences in early education settings with children from ages 0-8. 1-6 Cr. DEMAND.

664. Practicum in Administration and Facilitation of Early Childhood Programs. Supervised practicum in administering and coordinating early childhood programs. Must be taken at same time as CFS 624. 1-6 Cr. DEMAND.

671. Field Experiences or Research: Development of Young Children. Students must complete a variety of assignments that must be done with young children and their families. Does not require assignment to a specific setting. Must be taken at same time as 521 or 621. Prereq.: permission of program director. 1-6 Cr. DEMAND.

672. Field Experiences or Research: Parent and Family Studies. Opportunity to utilize a variety of settings to advance the students' understanding of parent and family education or involvement. Alternative to practicum for those who can document considerable previous experience in parent and family education. Must be taken at same time as 522 or 622. Prereq.: permission of program director. 1-6 Cr. DEMAND.

673. Field Experiences and Research in Early Education. Supervised field experience or long-term internships with child/family. By permission of adviser. 1-6 Cr. DEMAND.

674. Field Experiences or Research in Administration and Facilitation of Early

Childhood Programs. Opportunity to participate in variety of administrative roles in early childhood programs. A practicum for students which will provide experience as an administrator or coordinator of early childhood programs. 1-6 Cr. DEMAND.

683. Practicum in Early Childhood: Special Education. Supervised practicum in teaching young (ages birth to 6) handicapped children. Prereq.: Permission of dept. 1-4 Cr. DEMAND.

699. Thesis. 6 Cr. F, W, S, SUM.

Communication Disorders (CDIS)

A216 EDUCATION BUILDING/255-2092

Chairperson: Gerald Powers

Graduate Faculty: Jacobson, Kammermeier, Lavoie, Powers

Admission to the graduate program in the Department of Communication Disorders requires completion of an undergraduate minor in communication disorders with at least a 3.0 (B) average. When a student has a bachelor's degree in an area other than communication disorders, he or she may be admitted to the program after completion of 36 quarter hours of undergraduate work in communication disorders. Requirements for admission related to academic standing are the same as those established by the graduate school.

For the student seeking a Minnesota Teaching License in Communicative Disorders, the courses meeting the requirements in the areas of human relations, drug awareness and community health may be taken at the undergraduate level. The student who has not taken these courses may enroll in HURL 596 and 597, HETS 505 and 598. It must be understood that these courses are requirements for the teaching license and the credits earned for them will not apply to the master's degree in communication disorders.

This program is designed primarily for the full-time student. The part-time student wishing to complete the degree must enroll in evening classes during five regular academic years and as a full-time student for at least three summer quarters.

Plan A or B, 54 Cr.

I. Research

Prescribed:

Plan A: 9-15 Cr.

CDIS 620 Research in Speech-Language Pathology and Audiology, 3 Cr.

CDIS 699 Thesis, 3-9 Cr.

PSY 678 Introduction to Graduate Statistics, 3 Cr.

Plan B: Min. 6 Cr.

CDIS 620 Research in Speech-Language Pathology and Audiology, 3 Cr.

PSY 678 Introduction to Graduate Statistics, 3 Cr.

II. Major: Min., 39 Cr.

Prescribed:

CDIS 520 Experimental Phonetics, 3 Cr.

CDIS 526 Neurological Bases of Speech and Language, 3 Cr.

CDIS 566 Augmentative Communication Systems, 3 Cr.

CDIS 636 Diagnostics in Speech-Language Pathology, 3 Cr.

CDIS 642 Advanced Audiology, 3 Cr.

CDIS 648 Graduate Practicum—University Clinic, 6 Cr.

CDIS 650 Graduate Practicum—Internship, 6 Cr.

Select a minimum of two courses from the following:

(prereq.: basic course in selected area)

CDIS 670 Seminar: Voice Disorders, 3 Cr.

CDIS 671 Seminar: Phonological Disorders, 3 Cr.

CDIS 676 Seminar: Fluency Disorders, 3 Cr.

CDIS 678 Seminar: Language Disorders in Children, 3 Cr.

Select a minimum of two courses from the following:

CDIS 634 Cleft Palate, 3 Cr.

CDIS 635 Aphasia, 3 Cr.

CDIS 637 Motor Speech Disorders, 3 Cr.

CDIS 638 Alaryngeal Speech, 3 Cr.

III. Elective Courses

Plan A: 0-6 Cr.

Plan B: 9 Cr.

The Fifth Year Teacher Licensure Program

Admission to the Fifth Year program in communication disorders requires completion of an undergraduate major in communication disorders with at least a 2.75 grade point average. When a student has a bachelor's degree in an area other than communication disorders, program admission requirements include: (1) an overall grade point average of 2.75 and (2) completion of 39 quarter hours of preliminary course work with a grade point average of at least 2.75. Applicants who do not meet the standard admission requirements may be permitted to demonstrate their scholarship and qualify for acceptance by completing a limited program of course work.

A student must maintain a grade point average of at least 2.75 to continue in the Fifth Year program.

Students who have earned a minimum of 12 graduate credits with at least a grade point average of 3.0 and taken the Graduate Record Examination may apply for the master's degree in communication disorders. Acceptance to the program will be decided by the graduate faculty in communication disorders.

Students must also complete courses necessary to satisfy requirements for a Minnesota Teaching License (i.e., HURL 496-596, 497-597, and HETS 405-505, 498-598).

Minimum, 39 Cr.

- I. Academic Preparation Component: Min., 27 Cr.
 - CDIS 526 Neurological Bases of Speech and Language, 3 Cr.
 - CDIS 620 Research in Speech-Language Pathology and Audiology, 3 Cr.
 - CDIS 566 Augmentative Communication Systems, 3 Cr.
 - CDIS 634 Cleft Palate, 3 Cr.
 - CDIS 636 Diagnostics in Speech-Language Pathology, 3 Cr.
 - CDIS 637 Motor Speech Disorders, 3 Cr.
 - CDIS 642 Advanced Audiology, 3 Cr.

Select a minimum of two courses from the following:

- CDIS 670 Seminar: Voice Disorders, 3 Cr.
- CDIS 671 Seminar: Phonological Disorders, 3 Cr.
- CDIS 676 Seminar: Fluency Disorders, 3 Cr.
- CDIS 678 Seminar: Language Disorders in Children, 3 Cr.

- II. Professional Education Component: Min., 12 Cr.*
 - CDIS 648 Practicum—University Clinic, 6 Cr.
 - CDIS 650 Practicum—Internship, 6 Cr.

*Students must enroll in CDIS 648 and 650 until they have accumulated a minimum of 300 clock hours of supervised clinical practicum. Each student's practicum must include a minimum of two quarters in the university clinic and one quarter of clinical practice in the school setting.

COURSE DESCRIPTIONS

515. Topics in Speech-Language Pathology and Audiology. A study of specialized topics related to speech, language and hearing. Course will address areas of current interest to faculty and/or students (e.g., prevention of speech-language problems, microcomputer applications in communication disorders, training parents to work with their communicatively handicapped children). May be repeated to max. of 9 Cr. 1-3 Cr. DEMAND.

520. Experimental Phonics. Relationship between the acoustic features of speech sounds and perceptions of speech. 3 Cr. W.

526. Neurological Bases of Speech and Language. Neuroanatomy and neurophysiology, especially as it relates to speech and language. Prereq.: 322. 3 Cr. F.

531. Voice Disorders. Types and causes of voice disorders, principles underlying their diagnosis and treatment. 3 Cr. S.

532. Stuttering. An overview of the literature in the area of stuttering with emphasis on its nature and possible causes. A brief introduction to approaches for assessing and treating the disorder will be presented. 3 Cr. W.

534. Articulation Disorders. The nature, etiology, and treatment of functional articulation problems. Prereq.: 220. 3 Cr. W.

541. Hearing Disorders. Symptoms and pathology of hearing disorders, their medical, surgical and audiological management; amplification; educational and psychological management. 3 Cr. F.

545. Clinical Management of Hearing Impaired Children, 0-21. Identification and diagnostic procedures; audiological aspects, amplification aids, equipment; educational programs, procedures and materials; parent counseling and support services; social aspects; deaf culture; current issues and trends. 3 Cr. W.

550. Communication Disorders of the Aged. A study of the communication problems of the elderly. General considerations in the management of older persons with speech, language, and hearing problems will be outlined and discussed. 3 Cr. SUM, DEMAND.

556. The Speech-Language and Hearing Clinician in the Public School. Operating procedures of the speech-language pathologist in the schools; federal and state legislation; organizing and evaluating programs. Prereq.: 230. 3 Cr. W.

559. Introduction to Language. A survey of theories and methods of investigation of the various disciplines concerned with the study of language. 3 Cr. F.

560. Language Development. Speech and language acquisition in normal children. 3 Cr. W.

561. Language Appraisal and Intervention. Etiology, theory and supporting research, and approaches to treatment of delayed speech and language. 3 Cr. S.

566. Augmentative Communication Systems. To acquaint students in speech-language pathology and related fields with the various non-vocal communication techniques that have been developed for non-speaking persons. Emphasis will be placed on determining the most appropriate augmentative communication system for a particular client and teaching him/her how to use it effectively. 3 Cr. S.

568. Introduction to Children's Language. Language development from birth through adolescence emphasizing content and process. Recognition of language differences and deficits and suggestions for teaching language skills to pre-school and elementary school children. Not open to CDIS majors. 3 Cr. F.

584. Communication Disorders and the Classroom Teacher. Characteristics, causes and management principles of speech and hearing problems in children. Emphasis on management by classroom teachers. Not open to majors in communication disorders. 3 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

620. Research in Speech-Language Pathology and Audiology. Evaluation of methods and results of original research; experimental design; statistical procedures. 3 Cr. F.

634. Cleft Palate. The communication problems of the individual with a cleft palate; embryology, etiology, anatomy, physiology of clefts, surgical, prosthodontic, orthodontic, speech therapy and audiological interventions. 3 Cr. W.

635. Aphasia. Speech and language problems related to stroke and other forms of brain trauma. Comparison of current tests for aphasia and approaches to therapy for the aphasic patient. Prereq.: 426-526. 3 Cr. W.

636. Diagnostics in Speech-Language Pathology. Evaluation and use of formal and informal diagnostic materials, with an emphasis on interpretation of tests results. Includes participation in diagnostic evaluations and preparation of clinical reports. 3 Cr. F.

637. Motor Speech Disorders. Study of diagnosis and therapy for problems of conceptual motor planning (dyspraxia) and motor performance (dysarthria). 3 Cr. W.

638. Alaryngeal Speech. Study of theoretical and clinical issues in restoration of communication in the laryngectomized patient. 3 Cr. W, DEMAND.

642. Advanced Audiology. Review of audiograms and procedures. Recent developments in testing of pre-school children and babies; especially brain stem, site of lesion testing, hearing aids. 3 Cr. S.

648. Graduate Practicum: University Clinic. Application of theory and research to the treatment of clients with communication disorders. Must be repeated to min. of 6 Cr. 3 Cr. F, W, S.

650. Graduate Practicum: Internship. Application of theory and research to the treatment of clients with communication disorders. May be repeated one or more times. 6 Cr. F, W, S.

652. Organization and Administration of Speech-Language Pathology Programs. Study and discussion of the organizational, administrative, economic, legal, ethical and social-service factors relevant to the delivery of speech-language pathology services in a variety of employment settings. 2 Cr. DEMAND.

670. Seminar: Voice Disorders. Study of current practices in the identification and management of voice disorders. 3 Cr. S.

671. Seminar: Phonological Disorders. Theoretical bases, evaluative procedures, and treatment strategies for phonological approaches to disorders of articulation. 3 Cr. S.

676. Seminar: Fluency Disorders. Discussion and evaluation of contemporary approaches to the management of fluency disorders in children and adults with emphasis on stuttering. 3 Cr. F.

677. Seminar: Professional Issues in Speech-Language Pathology. Presentation and discussion of current professional issues of concern to speech-language pathologists and audiologists. 2 Cr. DEMAND.

678. Seminar: Language Disorders in Children. An in-depth study of issues related to the assessment and remediation of language problems exhibited by pre-school and school-aged children. Prereq.: consent of instructor. 3 Cr. S.

699. Thesis. 3-9 Cr. F, W, S.

Computer Science (CSCI)

139 ENGINEERING AND COMPUTING CENTER/255-4966

Chairperson: Ralph Carr

Graduate Faculty: Carr, Grover, J. Johnson, R. Johnson, Saeed, Schoenberger

COMPUTER SCIENCE (CSCI) COURSE DESCRIPTIONS

512. Computer Graphics. Graphical data processing, introduction to psychophysical photometry and display parameters, picture models and data structures, display software. Prereq.: 383. 3 Cr. DEMAND.

569. Introduction to the Theory of Computation. Finite state machines, algorithms, infinite machines, Turing machines. Prereq.: 465. 3 Cr. W.

571. Programming the Microcomputer. Microcomputer operations, system commands and introductory BASIC programming. 2 Cr. F, W, S.

572. Advanced BASIC Programming on the Microcomputer. Subscripted variables, functions, subroutines, formatting, data files, graphics. Prereq.: 571 or equivalent and instructor's approval. 2-4 Cr. DEMAND.

573. Analysis of Algorithms. Computing time functions, maximum, minimum, and average computing time of various algorithms. Prereq.: 469; STAT 229. 3 Cr. DEMAND.

574. Pascal on the Microcomputer. Pascal language on the microcomputer with structured program development. Prereq.: knowledge of a high level computer language such as BASIC and instructor's approval. 4 Cr. DEMAND.

575. Advanced Topics in Computer Science. An in-depth study of one or more issues in contemporary computer science not covered in other computer science courses. Prereq.: Consent of instructor. May be repeated with different topics to max. of 6 Cr. 1-6 Cr. DEMAND.

577. Computers in Society and the Classroom. Historical development of computing, use of BASIC language in timesharing, instructional timesharing in the school. Prereq.: consent of instructor. 3 Cr. DEMAND.

578. Artificial Intelligence and Heuristic Programming. Heuristic versus deterministic methods, game playing programs, theorem proving programs, decision-making programs. Prereq.: consent of instructor. 3 Cr. DEMAND.

579. Theory and Design of Expert Systems. Introduction to the concepts and applications of Expert Systems. Knowledge acquisition and knowledge representation in a broad spectrum of Expert Systems. The design process of Expert Systems and the evolution of generations of Expert Systems. Programming LISP. Prereq.: 478. 3 Cr. DEMAND.

585. Topics in Mini/Micro Computers. Microprogramming use of minis as simulators of microprocessors, cross-assemblers, data base management using minis, telecommunications and networks. Prereq.: 484. 3 Cr. S.

587. Mathematical Theory of Computer Language. Formal grammars, structure of formal languages, algorithms for top-down, bottom-up, left-right, other parsing techniques. Prereq.: 390, 469. 3 Cr. DEMAND.

589. Compiler Construction. One-pass compilation techniques, storage allocation, procedure and blocking, data types and transfer functions, languages designed for writing compilers. Prereq.: 487. 3 Cr. DEMAND.

COMPUTER SCIENCE (CSCI) COURSES FOR GRADUATE STUDENTS ONLY

610. Operating Systems and Computer Architecture. Study of computer architecture and factors influencing hardware and software design. Methods of accessing programs and data, synchronization of concurrent activities, protection, and reliability. Prereq.: Knowledge of programming and computer systems at undergraduate level. 3 Cr. DEMAND.

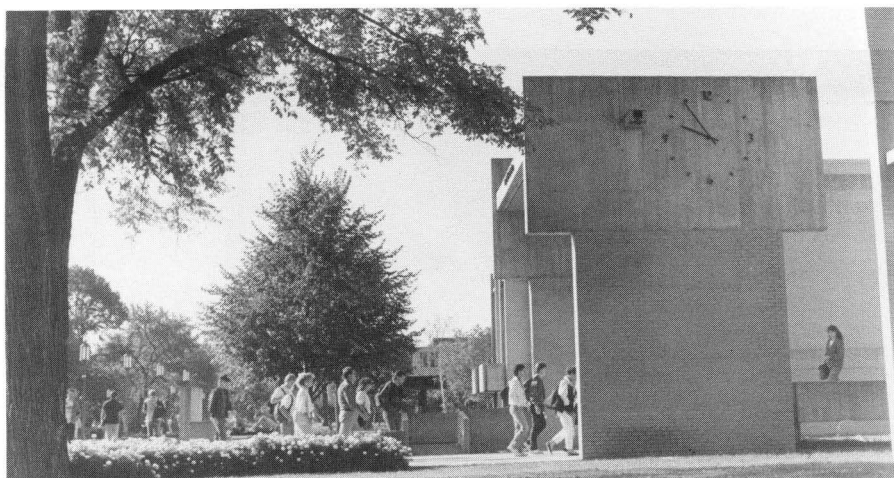
615. Large Computer Architecture. Study of large computer systems including pipelined machines and array processing. Prereq.: Knowledge of programming and computer systems at undergraduate level. 3 Cr. DEMAND.

620. Automata Theory I. Further study and analysis of finite and infinite machines in computer science. Prereq.: 469. 3 Cr. DEMAND.

621. Automata Theory II. Continued study and analysis of finite and infinite machines in computer science. Prereq.: 620. 3 Cr. DEMAND.

630. Modeling and Simulation I. A study of the construction of models which simulate real systems. Prereq.: MATH 443, 537. 3 Cr. DEMAND.

631. Modeling and Simulation II. Advanced study of models which simulate real systems. Prereq.: 630. 3 Cr. DEMAND.



Criminal Justice Studies (CJS)

G3 LAWRENCE HALL/255-4101

Chairperson: Robert Prout

Graduate Faculty: Dwyer, Frank, Kittel, Merrick, Murphy, Overy, Prout, Redding, Schreiber, Williamson

MASTER OF SCIENCE—Criminal Justice

Before applicants can be admitted to the graduate program in Criminal Justice, they must meet the admission procedures for graduate study at St. Cloud State University. This would include a 2.75 grade point average over the last two years of undergraduate education AND 480 on the verbal portion or 1000 on the combined verbal and quantitative portions of the Graduate Record Examination. If a student meets only ONE of the requirements, then provisional admission may be granted subject to the student taking four graduate courses: CJS 502, PSY 678, CJS 589, CJS 681-1, and receiving a B in each course and an overall grade point average of 3.25 for the four courses. The Center's graduate admissions committee will determine if the applicant's undergraduate degree is adequate preparation for admission to the graduate program. If the committee determines the applicant has a deficiency in his or her preparation, certain undergraduate course(s) may be required.

1. The Master of Science degree in Criminal Justice is designed to serve the needs of several types of students:
 - a. Persons who are engaged full or part-time in criminal justice careers at the local, county, state, and federal level.
 - b. Persons with no prior employment experience or an undergraduate degree in the field of criminal justice who wish to prepare for careers in law enforcement, corrections, administration, or an allied area.
 - c. Persons formerly engaged in careers within the criminal justice continuum who have secured leaves of absence and/or wish to acquire new competencies before seeking re-employment.
 - d. Persons who have an interest in or a desire to increase their general knowledge and understanding of criminal justice and criminal justice research.
 - e. Persons pursuing related graduate degrees who wish to complement their primary area of specialization with selected graduate course work in criminal justice.
 - f. Persons seeking scholarly preparation to teach or do research themselves in criminal justice programs, perhaps moving directly from the masters to doctoral study.
 - g. Persons without a related undergraduate degree in criminal justice who wish to prepare to teach in the field of criminal justice.
2. The central theme of the Master of Science degree in Criminal Justice is the research requirement and common core requirement for all students. The specialization requirement will provide an integrated learning experience which will provide a solid base of knowledge in criminal justice and will enhance the students' opportunities to develop

their own unique competencies.

The curriculum is course centered and traditional. Students will have the option of choosing one of three specializations. The courses within the Criminal Justice Administration and Counseling tracks are specified. Within the elective track, direct student involvement in course selection will be considered. A comprehensive written examination over all course work, a Master's thesis and a final oral defense of the thesis are requirements for graduation. Creative works, starred papers, or projects are not suitable for these requirements.

The credits earned for the thesis are included in the minimum 48 credits necessary for graduation. An oral defense of the Master's thesis is also required.

Plan A Only, 48 Credits

- I. Research: Min., 16 Cr.
 - CJS 502 Research in Criminal Justice, 4 Cr.
 - PSY 678 Introduction to Graduate Statistics, 3 Cr.
 - CJS 699 Thesis, 9 Cr.
- II. Core: Min., 20 Cr.
 - CJS 511 Organization and Administration in Criminal Justice, 4 Cr.
 - CJS 589 Seminar in Criminal Justice, 4 Cr.
 - CJS 601 History of Criminal Justice, 4 Cr.
 - CJS 681 Current Problems and Issues in Criminal Justice, 8 Cr.
- III. Specialization: Three tracks are available. A minimum of 12 credits required in any specialization area.

Track I: Criminal Justice Administration, Min., 12 Cr.

- POL 582 Public Personnel Administration, 4 Cr.
- POL 583 Managing Local Governments, 4 Cr.
- POL 584 Public Budgeting, 4 Cr.
- POL 585 Administrative Law, 4 Cr.

Track II: Counseling, Min., 12 Cr.

Required:

- PSY 651 Counseling Theories, 3 Cr.
- PSY 668 Counseling Procedures, 3 Cr.

Select other credits from:

- PSY 647 Introduction to Community Counseling, 3 Cr.
- PSY 666 Small Group Counseling Process, 3 Cr.
- PSY 671 Introduction to Marriage and Family Counseling, 3 Cr.

Track III: Elective, Min., 12 Cr.

The Track III specialization will be designed based upon the student's needs. The courses must be reviewed by the graduate advisory committee and approved by the student's adviser.

COURSE DESCRIPTIONS

502. Research in Criminal Justice. Fundamentals of research methodology, including planning, organizing and executing research papers. Research design, statistics, methods of inquiry and their application to criminal justice. 4 Cr. W, F.

511. Organization and Administration in Criminal Justice. An overview of the principles of organization and administration in criminal justice. Emphasis is placed on current theories of organization as they relate to the needs of the criminal justice process. 4 Cr. S, W.

540. Correctional Law. Study of laws regulating sentencing, authority of correctional agencies, prisoners' rights and remedies and community supervision. 4 Cr. DEMAND.

589. Seminar in Criminal Justice. Devoted to an exploration and analysis of special issues in the fields of corrections, law enforcement, and the general areas of the administration of justice: includes detailed examinations on vital issues and emerging trends which promise to affect the future. 4 Cr. S, F.

COURSES FOR GRADUATE STUDENTS ONLY

601. History of Criminal Justice. The historical development of America's criminal justice system from early English precedents to the late 20th century. 4 Cr. W, SUM.

681. Current Problems and Issues in Criminal Justice. Focus on a problem area or issue in the criminal justice system as explored through directed readings in the research literature. May be repeated to max. of 8 Cr. 2-4 Cr. W, S.

699. Thesis. 9 Cr. F, W, S, SUM.

Earth Sciences (ESCI)

46 MATHEMATICS AND SCIENCE CENTER/255-2009

Chairperson: George Shurr

Graduate Faculty: G. Anderson, C. Nelson, Shurr, Soroka, Watkins

The department does not currently offer a major program. Service courses for other graduate programs are offered in both the daytime and evening schedules.

COURSE DESCRIPTIONS

507. Minnesota Rocks and Waters. Geologic history, mineral resources and regional geology of Minnesota. Prereq.: 284 or consent of instructor. 4 Cr. S, SUM.

520. Seminar. Lectures, readings, discussion on selected topics. 1-4 Cr. May be repeated to max. of 9 Cr. F, W, S.

528. Glacial Geologic Processes. A survey of the mechanics of glaciers, the sediments and landforms they produce, followed by a discussion of the glacial geology of the upper midwest and Minnesota. Prereq.: 284. 3 Cr. W.

539. Stratigraphy and Earth History. Techniques of studying the stratigraphy of sedimentary rocks including correlation and mapping. Interpretations of ancient tectonic movements and sedimentary environments from these data. Prereq.: 285. 4 Cr. S.

556. Methods and Materials for Teaching Sciences. Modern approaches to teaching science in junior or senior high school. Integrated lab. 2 Cr. F, W.

560. Methods and Materials for Teaching Earth Sciences. Modern approaches to teaching junior high school science in classroom and laboratory, including work on the major junior high science curricula with emphasis on the earth science curriculum projects. Lab. 2 Cr. W.

577. Earth Sciences Institute. Selected topics in earth sciences for experienced teachers. 3-6 Cr. DEMAND.

Economics (ECON)

28 LAWRENCE HALL/255-2227

Chairperson: Michael White

Graduate Faculty: Banaian, Gallagher, Gleisner, Hendricks, Larkin, Lofgreen, Luksetich, Moghaddam, White

A graduate program in economics is available, Master of Science: Social Science (economics). See degree requirements under Social Science, page 112.

MASTER OF SCIENCE-Social Science (Economic Education)

This program is designed for K-12 teachers and supervisors who desire to improve their basic understanding of economics in order to effectively initiate, implement, and evaluate systematic programs in economic education in elementary and secondary schools. The program is designed to provide a basic background for those who have had little or no formal training in economic education. Each specific program will be developed by the appropriate advisers taking into account the individual's background and teaching/supervisory objectives.

This program is designed for both full-time and part-time students. Completion of the program will require attendance in either daytime or summer classes.

Plan B, Min., 48 Cr.

I. Research: Min., 3 Cr.

ED 614 Interpretation of Research, 3 Cr.

or

ED 615 Introduction to Research, 3 Cr.

II. Major: Min., 24 Cr.

A. Required:

ECON 610 Economic Education, 4 Cr.

ECON 631 Seminar in Economic Education, 3 Cr.

For Secondary School Personnel, in addition to above:

SST 640 Recent Trends in Teaching Social Studies in Secondary School, 3 Cr.

- B. Elective Courses in Economics, Min., 12 Cr.
Courses selected must be approved by major adviser.
- C. General Electives, Max., 7 Cr.
Any two graduate level courses from the following:
BEOA 516, 601, 607
IND 601, and/or any graduate offering from the following departments (with prior consent of major adviser):
GEOG, ESCL, HIST, AMST, SST, CDIS, POL, SOC, ANTH.
- III. Professional Education: Min., 18 Cr.
 - A. Elementary School Level Personnel Prescribed:
EDAD 696 Elementary School Supervision, 3 Cr.
ED 649 Practicum in Curriculum Construction and Development, 3 Cr.
 - B. Secondary School Level Personnel Prescribed:
ED 654 Improvement of Secondary School Instruction, 3 Cr.
ED 649 Practicum in Curriculum Construction and Development, 3 Cr.
 - C. All Programs Prescribed:
EDAD 601 Research and Theory in Educational Administration, 3 Cr.
Electives in Professional Education: Min., 9 Cr. The courses to complete this requirement are to be approved by appropriate professional education adviser. The combination of required and elective courses must include at least one course in foundations of education, one course in curriculum development, and one course in instructional methodology.
- IV. General Electives: Min., 3 Cr.
(All programs other than secondary major, consent of adviser.)

COURSE DESCRIPTIONS

520. Economics of Nonprofit Organizations. Economic theories of nonprofit and public organizations, their importance in the economy and the structure and performance of not-for-profit firms and public agencies. Prereq.: 273 and 274. 4 Cr. W, ALT.

532. Market Structure and Performance. A theoretical and empirical study of the relationship of market structure and firm behavior to market performance. Prereq.: 273 and 274. 4 Cr. S, ALT.

551. Resource and Environmental Economics. Analysis of problems of natural resource allocations, including air and water quality control. Economic efficiency, externalities, and long-run implications. Prereq.: 273, 274, or consent of instructor. 4 Cr. S ALT, DEMAND

552. Law and Economics. An economic analysis of the effects of law on market and non-market behavior which emphasizes the theory of externalities. The role of constitutions in establishing property rights is discussed, as well as the economic analysis of tort law. Prereq.: 273 and 274. 4 Cr. S, ALT.

559. Economic Analysis. The equivalent of Economics I and II. The economic process, national income analysis, money and the banking system, theory of income distribution, pricing systems, resource allocation. Primarily for M.B.A. students. 4 Cr. F, DEMAND.

560. Public Finance. The role of government in the economy with emphasis upon analysis of public revenues and expenditures, tax structure, intergovernmental fiscal relations, fiscal policy and public debt measurement. 4 Cr. W.

561. Public Economics: State and Local. The economics of state and local government. Public projects, tax and revenue structures, and intergovernmental relations. Some emphasis on Minnesota. Prereq.: 273, 274, or consent of instructor. 4 Cr. S.

565. Urban and Regional Economics. Analysis of regions, including the city as a regional center. Emphasis on regional development, location theory, central Place theory, financing. Some emphasis on Central Minnesota. Prereq.: 273, 274. 4 Cr. F, DEMAND.

570. Business Cycles and Forecasting. Factors causing fluctuations in business activity and national income; proposed methods of stabilization; business forecasting techniques. Prereq.: 273, 274. 4 Cr. DEMAND.

571. Money and Banking. A study of the monetary and banking system of the United States; bank credit, the banking system, Federal Reserve System, central bank policy, and relationship between bank credit, money and price levels. Prereq.: 273, 274. 4 Cr. F, W, S, SUM.

572. Regulation and Antitrust. A course in the economic theory and practice of government regulation and control of business activity in the United States. Prereq.: 273, 274. 4 Cr. F.

573. Labor Economics. Labor as a factor of production; growth of collective bargaining and labor legislation, with their attendant effects upon society. Prereq.: 273, 274. 4 Cr. W.

574. International Economics. International economic relationships; commercial and financial policies; tariffs, exchange controls, international monetary standards, and international settlements. Prereq.: 273, 274. 4 Cr. W ALT.

575. National Income and Employment. Study of flow of expenditures and income and their

impact upon national income and price levels, with appropriate consideration of possible stabilization controls. Prereq.: 273, 274. 4 Cr. F, W, S, SUM.

576. Price and Distribution Theory. Nature and scope of economic processes in free enterprise system; determination of prices, output and factor services in different market structures. Prereq.: 273, 274. 4 Cr. F, S.

578. History or Economic Thought. Development of economic thought and analysis from Adam Smith to present. Prereq.: 273, 274. 4 Cr. F, S.

579. Human Resource Economics. An examination of the factors which influence the quantity and quality of labor and of the economic aspects of government policy toward labor as an individual entity. Prereq.: 273, 274. 4 Cr. W ALT.

580. Seminar in Area Economic Studies. (Topical.) An examination of the economy and the current economic problems of selected regions, areas, or countries of the world. Prereq.: departmental approval. 1-4 Cr. May be repeated with different topic. Max. of 9 Cr. DEMAND.

581. Seminar. Selected topics in economic theory. Prereq.: departmental approval. 1-4 Cr. May be repeated with different topic. Max. of 9 Cr. DEMAND.

583. Contemporary Economic Problems. (Topical.) Consideration and possible solutions of problems arising from growth and development of modern institutions under the free enterprise system. Prereq.: departmental approval. May be repeated with different topic to max. of 9 Cr. 1-4 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

601. Readings in Economics. (Topical.) Guided study of individual investigation of special economic problems and/or theoretical topics. Credits and meetings by arrangement. May be repeated with different topic to max. of 9 Cr. 1-4 Cr. DEMAND.

602. Readings in Economic Education. (Topical.) Guided study of individual investigation of the literature in the field and/or its applications. Credits and meetings by arrangement. May be repeated with different topic to max. of 9 Cr. 1-4 Cr. DEMAND.

610. Economic Education. Examination of economic concepts found in the public school curricula, the economic theories necessary to understand these concepts, and development of models for examination of public policy issues. 4 Cr. DEMAND.

630. Seminar. Research and seminar presentation on selected economic topics. Prereq.: consent of department. May be repeated to max. of 9 Cr. 1-4 Cr. DEMAND.

631. Seminar in Economic Education. Research and seminar presentation of topics in economic education. Prereq.: consent of department. May be repeated. 3 Cr. DEMAND.

645. Economic Problems of Underdeveloped Countries. A study of the social and economic development, and of the leading issues in economic growth theory. Selected cases of underdeveloped countries will be examined in detail. 4 Cr. DEMAND.

677. Managerial Economics. Economic analysis as an aid in management and control. 4 Cr. DEMAND.

679. Comparative Economics. An analysis of the functioning of different economic systems. Comparison of the principles of operation using theoretical systems as a framework for comparison of the social and economic objectives. 4 Cr. DEMAND.

Educational Administration and Leadership (EDAD)

A131 EDUCATION BUILDING/255-2160

Director: Elaine Leach

Graduate Faculty: Dill, Holden, Leach

The following programs have been approved by the Minnesota State Department of Education for meeting the professional preparation requirements for licensure for the administrative positions where licensure is required by the state.

All candidates for licensure as principals or superintendents in Minnesota shall have completed three years of successful teaching experience on a license valid for the position in which the experience was obtained. For elementary principals, the experience must be at the elementary level. For secondary principals, the experience must be at the secondary level.

This program is designed for both full-time and part-time students. Full-time students must expect to complete part of their course load in evening classes.

MASTER OF SCIENCE PROGRAMS IN EDUCATIONAL ADMINISTRATION

Programs

Elementary School Administration Track
Secondary School Administration Track
School Business Management Track

Departmental Requirements

Assessment of Field Knowledge (Self Evaluation of Competencies). The student must fulfill all requirements for the Master of Science degree program in school administration as determined through the departmental assessment procedures.

The Master's degree candidate in elementary and secondary school administration, and school business management will be expected to complete at least one starred paper (EDAD 642) which will: (1) define a problem area; (2) locate and identify material relevant to the problem; (3) interpret and evaluate the material; and (4) report the findings in a logical and intelligible form. Obtain a copy of *A Manual for the Preparation of Field Studies, Theses, Creative Works and Starred Paper(s)* from the Graduate Office (Campbell-Ballou-Slade Model).

Applicants for this degree must have completed an undergraduate degree in teacher education (Tracks I and II) and must meet the entrance requirements for graduate studies. All programs shall have 45 quarter hours/credits minimum. Plan A or B is appropriate.

Track I	Elementary School Administration
Track II	Secondary School Administration
Track III	School Business Management (specific electives are required to qualify for the Minnesota Professional School Business Officer's Certificate)

The community education major can be pursued through the special studies alternative. See special studies in the front section of this bulletin.

- I. Research: Min., Plan A, 9 Cr.; Plan B, 6 Cr.
 - Prescribed: Plan A
 - PSY 678 Introduction to Graduate Statistics, 3 Cr.
 - EDAD 699 Thesis, 6 Cr.
 - Prescribed: Plan B
 - ED 615 Introduction to Research, 3 Cr.
 - EDAD 642 Starred Papers, 3 Cr.
- II. Major Specialization: Min., 15 Cr.
 - Prescribed for all tracks and either Plan A or B
 - EDAD 615 Introduction to Educational Administration, 1 Cr.
 - EDAD 650 School Law, 3 Cr.
 - EDAD 674 Educational Administration: Overview, 3 Cr.
 - EDAD 677 Personnel Administration, 3 Cr.
 - EDAD 696 School Supervision, 3 Cr.
 - HURL 614 Administration of Multicultural Education, 2 Cr.
- III. Track Requirements:
 - A. Track I, Min., 9 Cr.
 - EDAD 605 Internship: Elementary School Administration, 3 Cr.
 - EDAD 649 Elementary School Principalship, 3 Cr.
 - ED 623, or ED 646 or ED 648 or ED 649 (Curriculum Courses), 3 Cr.
 - B. Track II, Min., 9 Cr.
 - EDAD 606 Internship: Secondary School Administration, 3 Cr.
 - EDAD 676 Secondary School Principalship, 3 Cr.
 - ED 647 or ED 648 or ED 649 (Curriculum Courses), 3 Cr.
 - C. Track III, Min., 12 Cr.
 - EDAD 602 School Business Management I, 3 Cr.
 - EDAD 603 School Business Management II, 3 Cr.
 - EDAD 604 School Finance, 3 Cr.
 - EDAD 613 Internship: School Business Management, 3 Cr.
- IV. Electives, Min., 9 Cr.
 - Non-educational administration courses related to the field of educational administration, upon approval of adviser.

Master's equivalent students please refer to requirements on page 17.

SPECIALIST DEGREE AND SIXTH YEAR PROGRAM—EDUCATIONAL ADMINISTRATION

Programs:

Elementary School Administration
Secondary School Administration
General School Administration (Superintendency)

Applicants for admission to the Specialist degree program and the Sixth Year program must have completed a master's degree or the equivalent with a major in educational administration. For admission to the Specialist degree a grade point average of 3.20 is required over the master's degree program. Admission to the Sixth Year program is contingent upon achieving a 3.00 grade point average in the master's degree.

In the case where the applicant is not interested in pursuing the Specialist degree or cannot qualify for the Specialist degree program but must meet licensure requirements of the State Department of Education, the applicant may pursue the Sixth Year program in Educational Administration.

Applicants for admission to the Specialist Degree and the Sixth Year program must meet all of the entrance requirements and academic regulations for advanced graduate studies plus have completed a master's degree or the equivalent with a major in educational administration. These programs will lead to the licensure as a public school superintendent and either elementary or secondary school principalship.

Minimum: 45 quarter hours/credits

- I. Research: Specialist degree, Min., 9 Cr.
 EDAD 612 Field Study Design, 3 Cr.
 EDAD 641 Surveys and Field Studies, 6 Cr.
 Sixth Year program, Min., 3 Cr.
 EDAD 620 Applied Research, 3 Cr.
- II. Major Specialization for Specialist and Sixth Year:
 EDAD 602 School Business Management I, 3 Cr.
 EDAD 604 School Finance, 3 Cr.
 EDAD 608 Community Relations for School Administrators, 3 Cr.
 EDAD 611 Internship: School Superintendency, 3 Cr.
 EDAD 616 Seminar: Developmental, 1 Cr.
 EDAD 617 Seminar: Culminating Assessment, 1 Cr.
 EDAD 619 School Superintendency, 3 Cr.
 Electives in educational administration or supervision, curriculum, or instruction, 9 Cr.
- III. Electives, Min., 9 Cr.
 Non-educational administration courses related to the field of educational administration, upon approval of adviser.
- IV. Additional Requirement for the Sixth Year program:
 Comprehensive examination. Successful completion of this non-credit requirement. One day of testing.

SPECIALIST DEGREE—Special Education Administration

This program is described under the Special Education department.

COURSE DESCRIPTIONS

502. Overview of Community Education. Broad general background in area of community education. Historical beginnings; current status; program and process elements including governance, finance, staffing considerations. Special emphasis on its relation to recreation. 3 Cr. DEMAND.

598. Seminar in School Administration (Topical). Problems in organization and administration of schools. Areas of study determined by needs. Open only to experienced teachers and administrators. May be repeated to max. of 9 Cr. 1-4 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

602. School Business Management I. Organization and work of the school business office; budgeting; accounting, reporting, and auditing; central office records. 3 Cr. DEMAND.

603. School Business Management II. Supply and equipment administration; plant maintenance and operation; food services; pupil transportation; support personnel administration; health and safety program for school facilities; and risk management. 3 Cr. DEMAND.

604. School Finance. Problems of school finance; local, state and federal sources of school income; and the relationship of school finance to the effectiveness of the instructional program. 3 Cr. DEMAND.

605. Internship: Elementary School Administration. Onsite administrative internship of a minimum of 100 clock hours in an elementary school under the cooperative supervision of a licensed administrator and university supervisor. (Application must be made at least one quarter in advance.) May be repeated to max. of 6 Cr. 3 Cr. DEMAND.

606. Internship: Secondary School Administration. Onsite administrative internship of a minimum of 100 clock hours in a secondary school under the cooperative supervision of a licensed administrator and university supervisor. (Application must be made at least one quarter in advance.) May be repeated to a max. of 6 Cr. 3 Cr. DEMAND.

607. Internship: Community Education Administration. Onsite practical field experiences in cooperation with selected community agencies. Emphasis on interrelatedness and implementation of community education concepts and strategies. (Application must be made at least one quarter in advance.) May be repeated to max. of 6 Cr. Prereq.: 502, 618. 3 Cr. DEMAND.

608. Community Relations for School Administrators. Developing understanding of communication structures in the community; processes and procedures for working with various publics including parents, community agencies, special interest groups, media, business and industry; dissemination processes to the various publics. 3 Cr. DEMAND.

609. Middle School/Junior High School Administration. Problems peculiar to the administration and operation of a junior/middle school operation. 3 Cr. DEMAND.

610. Simulated Experiences in Educational Administration. Actual supervisory and administrative problem situations are dealt with through student participation in representations of the real problems. 3 Cr. DEMAND.

611. Internship: School Superintendency. On-site administrative internship of a minimum of 100 clock hours in a school district office under the cooperative supervision of a licensed superintendent and university supervisor. Application must be made at least one quarter in advance. For sixth year and specialist degree programs only. May be repeated to max. of 6 Cr. 3 Cr. DEMAND.

612. Administrative Field Study Design and Analysis. Emphasis: types of field studies; topic selection; problem clarification; design and format; selection of statistical instruments; and computer data analysis. Prereq.: to 641. 3 Cr. DEMAND.

613. Internship: School Business Management. On-site administrative internship of a minimum of 100 clock hours in a school district business office under the cooperative supervision of a designated school business officer and university supervisor. (Application must be made at least one quarter in advance.) 3 Cr. DEMAND.

615. Seminar: Introduction to Educational Administration. A student/staff seminar designed to orient the student to graduate study in educational administration. Focus on Self-evaluation Assessment. (Must be taken in the first 9 Cr. of master's level work in ed. ad.) 1 Cr. DEMAND.

616. Seminar: Developmental Assessment. A student/staff seminar designed to assess development of competencies essential for Sixth Year and Specialist degree work. (Must be taken in the first 9 Cr. of Sixth Year and Specialist program work.) Prereq.: 615. 1 Cr. DEMAND.

617. Seminar: Culminating Assessment. A staff/student seminar designed to provide culminating assessment of competencies essential for administrator candidates completing the Sixth Year or Specialist degree programs. (Must be taken prior to the final 9 Cr. of the program.) Prereq.: 616. 1 Cr. DEMAND.

618. Administration of the Community School. Emphasis: conceptual, human and technical skills; budgeting; statutes; roles and role relationships; coordination with community agencies and resources. 3 Cr. DEMAND.

619. School Superintendency. The role of the superintendent in providing leadership for the school board, staff, and community in the maintenance and improvement of the program of education. Major emphasis on superintendent and school board relations including the politics of educational policy making. 3 Cr. DEMAND.

620. Applied Research and Theory in Educational Administration. Experiences gained in this course should enable the graduate student to review, appraise, and apply research and theory to various aspects or problems in educational administration. 3 Cr. DEMAND.

640. School Plant Planning and Management. Plant planning and financing, bond elections, operation and maintenance of school buildings. 3 Cr. DEMAND.

641. Surveys and Field Studies. (For the Specialist degree only.) The theory, techniques, procedures, and results of school surveys and field studies. Written field study report required. Prereq.: 612. Arranged. Registration required in the next quarter after completing 612. 6 Cr. DEMAND.

642. Starred Papers. Research projects in educational administration. 3 Cr. DEMAND.

649. Elementary School Principalship. Staff responsibilities; inter-staff relationships; elementary school program; pupil accounting; school facilities. 3 Cr. DEMAND.

650. School Law. Statutes and judicial decisions affecting public education. Legal authority, powers, and liabilities of school personnel with respect to school finance, curriculum, property, contracts, pensions, tenure, etc. 3 Cr. DEMAND.

674. Educational Administration: Overview. Current trends in theory and practice of school administration in the U.S.; behavioral foundations of administrative relationships, roles of local, state, and federal agencies and boards. (Must be taken in the first 12 hours of the program in ed. ad.) 3 Cr. DEMAND.

676. Secondary School Principalsip. For students preparing for administration of secondary schools. Principles and practices in organization and administration of secondary schools. 3 Cr. DEMAND.

677. Personnel Administration in Education. Theories and principles; personnel policies and procedures; selection, appointment, and orientation; salary policies, evaluation, and professional welfare. 3 Cr. DEMAND.

696. School Supervision. Organization, purposes, and procedures of K-12 supervision including conceptual models of supervision; administrator's functions in diagnosis and improvement of instruction. 3 Cr. DEMAND.

697. Current Problems and Issues in School Administration. Content: a different administrative problem or issue each time offered. Students may register three times, each time for a different topic. 1-3 Cr. Max. of 6 Cr. DEMAND.

699. Thesis. 6 Cr. DEMAND.

English (ENGL)

108 RIVERVIEW BUILDING/255-3061

Chairperson: Michael Connaughton

Graduate Faculty: Abartis, J. B. Anderson, Coard, Connaughton, Crow, Dillman, A. E. Falk, Gorrell, Hibbard, Jackson, P. Keith, Kilborn, Klepetar, Leone, Lundquist, Meissner, J. Parham, S. Parham, Perry, Roney, Summers (Graduate Director in English), Tosh, E. Van Pelt, Young

This program is designed for both full-time and part-time students. Full-time students must expect to complete much of their course load in evening classes. Graduate courses are also offered in summer school, but a student cannot be assured of completing degree requirements solely with summer school work.

MASTER OF ARTS

The M.A. degree in English is an appropriate degree for those planning a program leading to the Ph.D. degree, for community college or secondary teaching, and for general cultural enrichment.

For unconditional admittance to the M.A. degree, the applicant must have completed at the undergraduate level not less than 36 quarter hours of credit in English, exclusive of general education courses, and must meet the admission standards as required by the Graduate Studies office.

A minimum of 15 credits must be earned in courses limited to graduate students.

Graduate students interested in future doctoral study should develop competence in an appropriate foreign language.

Plan A, 48 Cr. (Thesis)

I. Credits in English: Min., 38 Cr.

A. Prescribed:

ENGL 616 Literary Research (or equivalent course), 4 Cr.

ENGL 699 Thesis, 6 Cr.

or

ENGL 698 Creative Work, 6 Cr.

One 600-level course in English literature, 4 Cr.

One 600-level course in American literature, 4 Cr.

B. Electives: Min. of 20 Cr. must be elected in ENGL.

II. Cognate courses: Max. of 10 Cr. may be earned in approved cognate courses.

Plan B, 50 Cr. (Non-thesis)

I. Credits in English: Min., 40 Cr.

A. Prescribed:

ENGL 616 Research in English (or equivalent course), 4 Cr.

One 600-level course in English literature, 4 Cr.

One 600-level course in American literature, 4 Cr.

TWO starred papers written in conjunction with approved courses. One of these starred papers must be written in conjunction with ENGL 616. Obtain department specifications for starred papers from the Graduate Director in English.

- B. Electives: Min. of 28 graduate Cr. must be elected in ENGL.
- II. Cognate Courses: Max. of 10 Cr. may be earned in approved cognate courses.
- III. A student completing the Plan B program must pass a final oral examination on the starred papers submitted to the student's final evaluation committee.

MASTER OF SCIENCE

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution and must have completed at the undergraduate level a minimum of 36 quarter credits in English, exclusive of general education courses, and must meet the admission standards as required by the Graduate Studies office.

At least one-half of the Master of Science degree program must be earned in courses in which enrollment is limited to graduate students.

Plan A, 46 Cr.; Plan B, 49 Cr.

- I. Research: Plan A, 10 Cr.; Plan B, 4 Cr.
ENGL 616 Research in English (or equivalent course), 4 Cr.
ENGL 699 Thesis, 6 Cr. (Plan A only)
or
ENGL 698 Creative Work, 6 Cr. (Plan A only)
- II. Major: Min., Plan A, 20 Cr.; Plan B, 24 Cr.
One 600-level course in English literature, 4 Cr.
One 600-level course in American literature, 4 Cr.
Other credits to be selected with English department adviser.
- III. Professional Education: Min., Plan A or B, 9 Cr.
- IV. Electives: Plan A, 7 Cr.; Plan B, 12 Cr.
Credits to be selected with the English department adviser from related fields, Introduction to Graduate Statistics, Interpretation of Research, or additional courses in the major.
- V. Prior to graduation, students in Plan B must pass a comprehensive examination given by the English Department.

Plan C, 54 Cr.

- I. Research: Min., 4 Cr.
ENGL 616 Research in English (or equivalent course), 4 Cr.
- II. Major: 24 Cr.
One 600-level course in English literature, 4 Cr.
One 600-level course in American literature, 4 Cr.
Selected course work in English to total 24 credits, and not to include more than one course by independent study.
- III. Educational Foundations: 6 Cr.
Students will select from the list developed by the College of Education.
- IV. Educational Applications and Implementations: 15 Cr.
Selected work, with the English adviser's approval, from methods workshops, practicums, internships, school curriculum development, special projects related to the teaching assignment, and from ENGL 650 and other major courses and courses in related fields, as offered and as appropriate to the student's situation.
- V. General Electives: Min., 6 Cr.
Selected work from the major or related fields, with the approval of the English adviser.
- VI. Candidates are required to complete successfully a final examination, oral or written, covering the materials included in a professional portfolio to be developed as sanctioned by the adviser. The examination will be conducted by two members of the English Department and one member from outside the department.

PERMANENT WORKSHOP DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to page 27 to determine the maximum number of workshop credits which may be applied to graduate degrees.

538. Mississippi River Creative Writing Workshop in Poetry and Fiction. Discussion of techniques and ideas in writing poetry and fiction, including student writing exercises and visits from published professional poets and fiction writers from the upper Midwest. Cannot be used as substitute for 332 or 334. 3 Cr. SUM.

COURSE DESCRIPTIONS

521. Literary Theory and Criticism. The concepts which apply to such problems as the writer's creative process, the various purposes of literary art, form, and technique, and the responses that literature elicits. 3 Cr. F, S.

525. Rhetoric of Writing. Rhetorical analysis of written language for students of composition and literature, covering differences between speech and writing, the modes of written discourse, stylistics, and the history of written composition. 4 Cr. W.

526. Specialized Writing. Advanced study and practice of writing in selected professional areas. Variable content. Sample topics include technical and scientific writing, writing for educators, government report writing, and administrative writing. Prereq.: 339 or consent of instructor. May be repeated to max. of 8 Cr. 4 Cr. DEMAND.

531. Teaching ESL: Theory and Methods. Linguistics and language acquisition theory applied to teaching English as a Second Language. Knowledge of foreign language recommended. Prereq.: 232 or permission of instructor. 4 Cr. DEMAND.

532. Topics in Teaching ESL. Variable topics in teaching English as a Second Language and second language acquisition, stressing the integration of theory, method, and practice. Sample topics: materials development, methods for specific skill areas, language assessment, and program development. Prereq.: 431-531 or permission of instructor. May be repeated with consent of instructor and adviser to max. of 8 Cr. 4 Cr. DEMAND.

533. Computers and Language. Introduction to computer applications in language data analysis and processing; presentation of the fundamentals of SNOBOL. Prereq.: 232 or MATH 169 or consent of instructor. 4 Cr. DEMAND.

534. English Grammars. The application of modern linguistics to the description of English grammar, including an introduction to the theories and methods of structural and generative-transformational grammars. Prereq.: 232 or equivalent. 4 Cr. DEMAND.

535. History of the English Language. The development of English sounds, grammatical structures, and vocabulary from Old English to Modern English; the reading and analysis of selected texts. Prereq.: 232 or equivalent. 4 Cr. DEMAND.

536. American English. Contemporary spoken American English, social and regional dialects, and their relationship to the written language. Prereq.: 232 or equivalent. 3 Cr. DEMAND.

537. Advanced Practices in Creative Writing. Study and practice in writing of poetry, plays, and fiction of publishable quality at the advanced undergraduate and graduate level. May be repeated for additional credit when content varies. Prereq.: 332, 333, or 334, or permission of the instructor. 4 Cr. F, W, S.

539. Topics in Linguistics. One or more topics of current importance in linguistics. Prereq.: 232 or equivalent. May be repeated to max. of 8 Cr. with consent of instructor and adviser. 4 Cr. DEMAND.

541. Milton. "Comus," "Paradise Lost," "Paradise Regained," "Samson Agonistes," "Areopagitica" and the minor poetry. 4 Cr. S.

545. The Nineteenth-Century English Novel. Austen, Scott, Mary Shelley, Dickens, Thackeray, Meredith, Butler, Eliot, Hardy, and others. 4 Cr. DEMAND.

546. The American Novel. The development of the American Novel. 4 Cr. DEMAND.

547. Seminar in Literary Themes. Selected recurrent themes in literature, such as literature of the American Revolution, the hero from Finn to Frodo, images of success in fiction, and the gothic. Variable content. May be repeated to maximum of 8 Cr. 4 Cr. DEMAND.

548. Seminar in Literary Forms. The forms of literature, such as satire, autobiography, and new fiction. Variable content. May be repeated to maximum of 8 Cr. 4 Cr. DEMAND.

550. Science Fiction. A study of science fiction as a literary genre: its history, development, relationship to other genres, criticism, concepts, and types. Emphasis on twentieth-century science fiction. 4 Cr. DEMAND.

551. Women in Literature. Images of women and their life experiences as revealed in literature. Emphasis on portrayals by women writers of conflicts between role definition by society and women's struggle for self-realization. 4 Cr. F.

553. Literature of Dying and Death. Literary treatments of the problems faced by the dying person and his/her associates. Biographies, poetry, and fiction which provide insight into the nature and meaning of death. 4 Cr. DEMAND.

558. Topics in Teaching Composition. Topics of concern to teachers of English: new theories of composition, computer-assisted instruction, grammar review, sentence combining, and writing evaluation and diagnosis. May be repeated to max. of 6 Cr. 3 Cr. DEMAND.

559. Seminar in Teaching Language. Variable content stressing methods, theories, and problems in teaching language in both secondary school and college. Sample topics: problems in teaching traditional grammar; teaching linguistic concepts, linguistics and reading. May be repeated to a maximum of 8 Cr. 4 Cr. DEMAND.

560. Seminar in Teaching Literature. Variable content stressing theories, methods, and problems in teaching literature in junior and senior high schools. Sample topics: adolescent literature; problems in literary comprehension; teaching fiction, poetry or drama. May be

repeated to a maximum of 8 Cr. 4 Cr. DEMAND.

567. Recent Best Sellers. Reading and discussion of various types of contemporary books that are worthwhile and interesting. Variable content. May be repeated to a max. of 9 Cr. 4 Cr. DEMAND.

569. Literature and American Minorities. A study of contributions of American minorities: Black Americans, American Indians, Asian Americans, and Mexican Americans, to American Literature through themes, content, and forms. Content and focus to vary. 4 Cr. DEMAND.

585. The Eighteenth-Century English Novel. Defoe, Richardson, Fielding, Smollett, Sterne, and related authors. 4 Cr. DEMAND.

587. Topics in the Drama. A study of various forms, themes, or periods in dramatic literature, such as "Tragedy" or "Political Drama." May be repeated once with different topics. 4 Cr. W.

590. European Writers of the Twentieth Century. 4 Cr. DEMAND.

594. American Writers of the Twentieth Century. 4 Cr. DEMAND.

597. British Writers of the Twentieth Century. Study of selected important writers of the period, chosen on the basis of theme or genre. Emphasis will vary. 4 Cr. S.

COURSES FOR GRADUATE STUDENTS ONLY

616. Research in English. Bibliography, methods, and tools for research in literature, language and writing. 4 Cr. F.

622. History of Literary Theory and Criticism. Major texts from ancient times to the present. Designed to provide the student with a background of critical history. 4 Cr. DEMAND.

637. Old English. The language and literature of the Anglo-Saxon period. 4 Cr. DEMAND.

639. Seminar in TESL and Language Acquisition Research. Variable topics stressing critical review of research in TESL and language acquisition. Sample topics: first and second language acquisition; language assessment; error analysis; discourse analysis; TESL methods and materials. May be repeated with consent of instructor and graduate adviser. 4 Cr. DEMAND.

643. Shakespeare Studies. The text and sources, theories, and history of representative comedies, tragedies, and histories. 4 Cr. DEMAND.

650. Topics in Teaching English. A seminar in selected topics in teaching English. Sample topics would include teaching writing, studies in literacy, the English curriculum, current research in teaching English, teaching literature to adolescents. Variable content. May be repeated once for credit. 4 Cr. DEMAND.

656. The Teaching of College Composition. A survey of significant approaches to the teaching of writing in college; analysis of pedagogical materials and methods in composition. Required for all Teaching Assistants in English. 4 Cr. F.

657. Internship in the Teaching of College English (Literature). Individual instruction in the theory and techniques of effective college classroom teaching of literature, and practical experience in solving the problems of actual classroom instruction under the direct supervision of an experienced teacher. Research project on the teaching of college English required. Admission by consent of the chairperson. 2 Cr. DEMAND.

658. Writing Skills Center Practicum. Practicum in the theory, operations and materials of a Writing Skills Center. 2 Cr. DEMAND.

664. Seminar in American Literature through the Civil War. Study of one or more important authors such as Franklin, Poe, Thoreau, Hawthorne, and Whitman. 4 Cr. DEMAND.

665. Seminar in American Literature of the Later Nineteenth Century. The writings of one or more major literary figures such as Twain, James, Dickinson, Howells, and Crane. 4 Cr. DEMAND.

666. Seminar in American Literature of the Twentieth Century through World War II. The writings of one or more major literary figures such as Frost, Hemingway, Faulkner, Eliot, and Steinbeck. 4 Cr. DEMAND.

667. Seminar in American Literature of the Twentieth Century since World War II. A study of significant authors from World War II to the present with a selection from such writers as Bellow, Baldwin, Lowell, O'Connor, and Welty. 4 Cr. DEMAND.

670. The Study of Middle English Literature. Selected aspects of English literature from the twelfth to the sixteenth centuries. 4 Cr. DEMAND.

675. Seminar in English Renaissance Literature. The literary works, background and criticism of the poetry, prose and drama of selected principal writers of the English Renaissance. 4 Cr. DEMAND.

684. Seminar in Restoration and Eighteenth-Century British Literature. Selected genres, authors, or themes in English literature from 1660-1789. 4 Cr. DEMAND.

687. Seminar in Nineteenth-Century British Literature. A selected aspect of nineteenth-century British literature. The content will vary. 4 Cr. DEMAND.

689. Seminar in Twentieth-Century British Literature. Selected aspects of twentieth-century British literature. The content will vary. 4 Cr. DEMAND.

696. Seminar in World Literature. Selected readings from the works of one or more major

world figures. 4 Cr. DEMAND.

697. Contemporary Thought in Literature. A study of the philosophical and cultural content of selected contemporary writings. 4 Cr. DEMAND.

698. Creative Work. 6 Cr. F, W, S, SUM.

699. Thesis. 6 Cr. F, W, S, SUM.

Foreign Languages and Literature

228 BROWN HALL/255-4142

Chairperson: William Langen

Graduate Faculty: Langen, Levilain

This department currently does not offer a major program. Service courses for other graduate programs may be offered in either the daytime or evening schedules.

COURSE DESCRIPTIONS

French 511. Advanced Studies in French Literature. Seminar for intensive study of a particular movement, author, or work as announced in advance. To be taught in French. Prereq.: 9 credits of literature or consent of instructor. 1-4 Cr. May be repeated to max. of 12 Cr. DEMAND.

German 511. Advanced Studies in German Literature. Seminar for intensive study of a particular movement, author, or work as announced in advance. To be taught in German. Prereq.: 9 credits of literature or consent of instructor. 1-4 Cr. May be repeated to max. of 12 Cr. DEMAND.

French 514. Advanced Studies in French Literature in Translation. Seminar for intensive study of a particular movement, author, or work as announced in advance. Prereq.: 9 credits of literature or consent of instructor. 1-4 Cr. May be repeated to max. of 12 Cr. DEMAND.

French 554. Advanced Methodology in Teaching of Foreign Languages.

Russian 554. Advanced Methodology in Teaching of Foreign Languages. A seminar dealing with problems of teaching foreign languages at the elementary or secondary level and with an examination of recent trends in methodology. Discussion of the course content in English and in the foreign languages. Offered according to need. 1-4 Cr. DEMAND.

French 560. Study Abroad. Prereq.: FREN 311, 312, and approval of program director. 3-6 Cr. DEMAND.

German 560. Study Abroad. Prereq.: GERM 311-313, and approval of program director. 3-6 Cr. DEMAND.

Geography (GEOG)

314 STEWART HALL/255-3160

Chairperson: C. W. Harper

Graduate Faculty: Addicott, Bixby, Coppock, Richason, Wixon

MASTER OF SCIENCE

Admission to the graduate program requires completion of at least an undergraduate minor in geography. In some cases, the applicants may be required to complete additional undergraduate work even though they may have completed a minor or major. Applicants must have completed a baccalaureate degree from an accredited college or university. Teaching applicants will complete the program described below. Applicants who do not have a background in teacher education should confer with the department chairperson.

At least one-half of the Master of Science degree program must be earned in courses in which enrollment is limited to graduate students.

This program is designed for both full-time and part-time students. Full-time students must expect to complete part of their course load in evening classes.

Plan A, 45 Cr.; Plan B, 48 Cr.; Plan C, 54 Cr.

I. Research: Min., Plan A, 9-15 Cr.; Plan B or C, 3 Cr.

- ED 614 Interpretation of Research, 3 Cr. (Plan C only)
or
ED 615 Introduction to Research, 3 Cr.
GEOG 699 Thesis, 6-9 Cr. (Plan A only)
- II. Major: Min., Plan A, 18 Cr.; Plan B or C, 24 Cr.
Advanced study in subject matter, methods, materials, and curriculum.
- III. Professional Education: Min., Plans A or B, 9 Cr.
Credits to be chosen with the approval of the professional education adviser.
- IV. Electives: Min., Plan A, 3-6 Cr.; Plan B, 9 Cr.; Plan C, 6 Cr.
- V. Educational Foundations: Min., 6 Cr. (Plan C only)
Students will select from a list developed by the College of Education and approved by the Graduate Council.
- VI. Educational Applications and Implementations: Min., 15 Cr. (Plan C only)
Workshops, practicums, internships, school curriculum development, special projects related to the teaching assignment. (Approval of major adviser.)

COURSE DESCRIPTIONS

506. Thematic Cartography. Application of cartographic techniques to the mapping of various geographic data. Topical. Prereq.: 305 and/or consent of instructor. 4 Cr. W.

507. Production Cartography. The course introduces the use of the vertical process camera and the techniques of cartographic scribing. Prereq.: 305. 4 Cr. W, ALT.

508. Remote Sensing: Application and Interpretation. The study of the characteristics and qualities of nonconventional remote sensing imagery as it applies to the inventory and assessment of various environmental phenomena. Topical. Prereq.: 350 or approval of instructor. 4 Cr. S.

554. Regional Planning. Comparative regional planning. Utilization of case studies from various countries, stressing economic distribution and ideologic differences. Topical. 4 Cr. F ALT.

555. Urban Site Development. Emphasis on the art of planning the arrangement of buildings and other structures on the land so as to be in harmony with each other and the environment. 4 Cr. S ALT.

557. Historic Preservation Planning. A systematic view of historic preservation planning in the United States. Attention is given to district and neighborhood preservation. Emphasis on investment analysis as a preservation tool. Topical. 4 Cr. S ALT.

559. Outdoor Recreation Land Use. Case studies and field investigations of outdoor recreation land use and related activities. Topical. Prereq.: 279 or consent of instructor. 4 Cr. S.

572. Geomorphology. The configuration of the earth's surface and physical processes which have brought the surface to its present condition. Topical. 4 Cr. F.

575. Climatology and the World's Climates. Inspection and analysis of climatological data with respect to climatic types and their corresponding climatic controls. Emphasis is given to spatial distribution. Topical. 4 Cr. DEMAND.

580. Agricultural Geography. World area differences in crop, livestock, and technological patterns. Special emphasis on farming in the United States. Topical. 4 Cr. F ALT.

586. Political Geography. Geographic concepts applied to the analysis of political organization and behavior. Topical. 4 Cr. S, DEMAND.

590. Urban Geography. The development of spatial patterns and relationships within and among urban centers and non-urban areas. Topical. 4 Cr. W ALT.

592. Water Resources. Development and management of water resources: problems of supply, distribution, quality, pollution, floods and variability; case-studies in selected regions, brief background in hydrological processes. Topical. 4 Cr. F ALT.

COURSES FOR GRADUATE STUDENTS ONLY

601. Research in Geography. A seminar or conference course for students wishing to investigate some phase of this subject. Credits and meetings by arrangement. 1-4 Cr. F.

602. Readings in Geography. A seminar or conference course for students wishing to investigate the geography of a particular region of the world. Credits and meetings by arrangements. 1-4 Cr. W.

630. Seminar. Research and seminar presentation on a selected geographic topic. Regional or topical. Prereq.: consent of instructor. Variable credit. 1-4 Cr. May be repeated to max. of 9 Cr. DEMAND.

644. Internship: Practical Geography. Requires consent of the department and is limited to graduate students only. 1-8 Cr. DEMAND.

650. Land Use Analysis: Examination of the Nature, Use, and Conservation of the Land. Stress is placed on land use planning techniques. Permission of instructor. Topical. 4 Cr. DEMAND.

654. Urban, Regional and Resource Planning. Urban and regional planning field; concepts, philosophies and theories of planning; review of case-studies selected to illustrate different frameworks of urban, regional and resource planning. Topical. 4 Cr. DEMAND.
699. Thesis. 3-9 Cr. F, W, S, SUM.

Gerontology (GERO)

217 STEWART HALL/255-3014

Director: Dena Shenk

Also see Interdisciplinary Studies Department.

COURSE DESCRIPTIONS

511. Aging Policy and Programs. An examination of the federal, state and local framework of services and programs for the aging. Prereq.: GERO core requirements or consent of instructor. 3 Cr. F.

515. Women and Aging. An exploration of the position of older women in society and the particular problems of and issues for women as they age. Prereq.: GERO core requirements or consent of instructor. 3 Cr. DEMAND.

520. Anthropology and Aging. This course will focus on the aging process in cross-cultural perspective, including consideration of the effects of ethnicity on the aging experience in the U.S. Application of the methods and theory of anthropology to aging will be stressed. 3 Cr. DEMAND.

540. Seminar. Analysis of issues or topics of concern in the field of aging. A specific topic will be selected each time the course is offered. Prereq.: completion of core requirements or consent of instructor. May be repeated to a max. of 9 Cr. 1-4 Cr. DEMAND.

542. Field Experience Seminar. Weekly meetings with faculty supervisor and other students involved in field placements, to discuss experiences and relevant issues. Taken concurrently with 543, Field Experience or 644, Gerontology Internship. 2 Cr. F, W, S.

543. Field Experience in Gerontology. Introductory field placement including observation of and orientation to a field site. Taken concurrently with 542, Field Experience Seminar. 2 Cr. F, W, S.

COURSES FOR GRADUATE STUDENTS ONLY

620. Advanced Policy Issues in Gerontology. An in-depth exploration of key concepts and major issues in the field of aging. Students will formulate their position on each major issue, based on lectures, readings, and discussions. 4 Cr. F.

644. Gerontology Internship. Supervised field experience in an agency, program or institution working with older adults. Arranged by contract between site supervisor, faculty supervisor and student. Taken concurrently with 542, Field Experience Seminar. 4-16 Cr. F, W, S.

Health Education and Traffic Safety (HETS)

S-30 HALENBECK HALL/255-2185

Basement WHITNEY HOUSE/255-4251

Chairperson: John Palmer

Graduate Faculty: Dobey, Hortis, Kelly, Osendorf, Palmer, Risk, Waxlax

MASTER OF SCIENCE—Health Education

Admission to the graduate program in health education requires completion of an undergraduate minor or equivalent of at least 36 quarter hours in health. In some cases, the applicant may be required to complete additional undergraduate work even though a major or minor may have been completed. Applicants must have completed a baccalaureate degree from an accredited college or university. Teaching applicants will complete the program described below. Applicants who do not have a background in teacher education should confer with the department chairperson.

Under Plan B, candidates are required to write a starred paper in conjunction with a graduate health education course of their own choosing. The paper shall be a detailed study and shall follow the style manual available through the Graduate Studies office. Further, in addition to the final written comprehensive examination, the candidate will be required to take a final oral examination on this project.

At least one-half of the Master of Science degree program in health education must be earned in courses in which enrollment is limited to graduate students.

This program is designed for both full-time and part-time students. Full-time students must expect to complete part of their course load in evening classes. The part-time student can complete the program through regular evening instruction or through summer quarter attendance.

Some offerings provide in-service courses to practicing professionals and service courses for other graduate programs.

Plan A, 45 Cr.; Plan B, 48 Cr.

I. Research: Min., Plan A, 9 Cr.; Plan B, 3 Cr.

Prescribed:

HETS 601 Research Methods in Health Education, 3 Cr.

HETS 699 Thesis, 6-9 Cr. (Plan A only).

II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.

Selected course work in health education and related fields with consent of adviser.

III. Professional Education: Min., Plans A or B, 9 Cr.

Consent of secondary education adviser.

IV. General Electives: Min., Plan A, 3-6 Cr.; Plan B, 9 Cr.

Prescribed: PSY 678 Introduction to Graduate Statistics, 3 Cr.

Electives from related fields or courses in the major. Consent of adviser.

Students who wish to qualify for licensure as a supervisor, consultant, director, or coordinator of school health programs under Minnesota EDU 325 will have to meet the following minimum requirements: A major in health education at the Master's degree level. A minimum of 15 quarter hours of graduate credit in administration and supervision from the following courses or comparable approved courses in administration and supervision:

HETS 625 Supervision of School Health Programs, 3 Cr.

EDAD 601 Research and Theory in School Administration, 3 Cr.

EDAD 674 Educational Administration, 3 Cr.

EDAD 677 Personnel Administration, 3 Cr.

EDAD 696 Elementary School Supervision, 3 Cr.

A minimum of 6 quarter hours of graduate credit from the following courses:

HETS 515 Health Education Curriculum Development, 4 Cr.

HETS 598 Elementary School Health Program, 3 Cr.

HETS 639 Practicum, 3 Cr.

The candidate must have the required teacher's license for health education and three years of successful professional experience in that discipline.

HEALTH EDUCATION AND TRAFFIC SAFETY (HETS) PERMANENT WORKSHOP DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to page 27 to determine the maximum number of workshop credits which may be applied to graduate degrees.

551. Workshop: Emergency Driving Techniques for Inservice Driver Education Instructors. Designed to cover the organization and administration of program development. Classroom and laboratory instruction will be provided. Practical demonstrations and time for individual instruction will be provided. All phases of emergency driving instruction will be covered. 1 Cr. SUM.

555. Workshop: Special Topics in Traffic Safety. Specific strategies for promoting quality driver education will be identified. Strengths and weaknesses of various strategies will be discussed. Participants will be given an opportunity to develop a specific action plan for promoting driver education in their geographic area of interest. May be repeated three times. 1-3 Cr. S, SUM.

560. Workshop: Program Sharing. A variety of programs providing educators and interested community members an opportunity to examine chemical abuse intervention and prevention programs. 1 Cr. F.

561. Workshop: Primary Grades Health Curriculum. A practical, participative experience in learning about the Seattle Model of health instruction in the primary grades. 2 Cr. SUM.

562. Primary Grades Health Curriculum Follow-up Workshop. On-site evaluation of Primary Grades Health Curriculum implementation. Also, a one-day reconvening session on campus. 1 Cr. SUM.

563. Workshop: School Health Curriculum Project, Intermediate Grades. An elementary school health education program, grades 4-6. 2 Cr. SUM.

564. Implementing "Kids Teaching Kids" Program. An exploration of the role of an adviser in the "Kids Teaching Kids" elementary program. The influence of peers, development of healthy attitudes and the making of responsible decisions are included. Emphasis will be on the preparation of sixth grade peer leaders to teach. 1 Cr. W.

COURSE DESCRIPTIONS

505. Mood Modifying Substances in Contemporary Society. A study of mood modifiers including alcohol and nicotine. Suggested educational strategies K-12. Complies with requirements of MSA 126.05. Prereq.: 90 Cr. of prior course work 3 Cr. F, W, S, SUM.

511. Nutrition: Older Adult. Nutritional status and needs of the older adult. Common nutritional problems of the elderly. Overview of the programs designed to serve the health and nutrition needs of the older adult. Prereq.: 210 or permission of instructor. 4 Cr. W.

512. Advanced Nutrition. Current topics in nutrition; relationship of nutrition to physical performance; methods of nutritional assessment; and complex nutrient needs. Prereq.: 210 or permission of instructor. 4 Cr. S.

515. Health Education Curriculum Development. Organization and development of a school health curriculum, K-12; techniques for course of study construction. Lab. Prereq.: 210, 215, 301, 315, 481. 4 Cr. F, S, DEMAND.

523. Basic Electrocardiography. A study and measurement of the electrical activity associated with cardiac function. Prereq.: PE 349 or permission of instructor. 3 Cr. S.

580. Fleet Safety Supervision. A course designed to assist transportation fleet personnel with supervision, budgets, scheduling, accident investigation and regulations. 4 Cr. F, W.

581. Human Sexuality. Body growth and development, reproduction, and heredity. Role of the home, church, school and community in family life education, dating and courtship, marriage and family living. 4 Cr. F, W, SUM.

582. Environmental Health. Effects of environmental factors, processes, and activities on human health, comfort, welfare, and survival. Prereq.: 125 or 215 or instructor's consent. 3 Cr. DEMAND.

583. Highway Traffic Problems and Procedures. The identification of specific community and environment concerns related to traffic problems. Local problems will be identified and solutions attempted. 3 Cr. W, S.

590. Organization and Administration of Driver Education. Administrative and supervisory techniques related to scheduling, record keeping, research report writing, government regulation and budgeting. Prereq.: 390 or certification. 4 Cr. F, W, SUM.

598. Elementary School Health Program. Concepts of health, disease, safety, family life, nutrition, first aid, and consumer information for the elementary school. Complies with requirements of: MSA 126.02, Subd. 2 and 5, MCAR 3.050. Prereq.: 90 Cr. of prior course work 3 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

601. Research Methods in Health and Physical Education. Selection of research topics, methods, laboratory research, application of statistical procedures, formal writing, experimental design. 3 Cr. SUM.

620. Seminar in Physiology of Exercise. A discussion and evaluation of current research and conditioning trends in exercise physiology. Prereq.: PE 349 or 449. 3 Cr. SUM.

621. Laboratory Techniques in Exercise Physiology. The study of advanced exercise physiology laboratory techniques for students who plan to continue studies in the exercise physiology area. Prereq.: 449 or 620, Cardiopulmonary resuscitation certification. 4 Cr. DEMAND.

622. Exercise and Fitness Prescription. Application of the information obtained in Laboratory Techniques (621). Students will learn how to prescribe programs that will promote "wellness" and lead to healthier lifestyles. Prereq.: 449 and/or 620, and 621. 3 Cr. DEMAND.

624. Internship in Exercise Physiology and Cardiac Rehabilitation. Course is designed to give the student a Phase I and Phase II hospital or clinic cardiac rehabilitation experience. Prereq.: PE 620, 621 and 622. 3-12 Cr. DEMAND.

625 Supervision of the School Health Program. History, legal requirements, budget, scheduling, coordination, public relations, and philosophy as each of these relates to the school health program. 3 Cr. DEMAND.

630. Seminar in School Health Education. Lectures, readings, research and discussion on selected topics. 1-4 Cr. May be repeated with different topics to max. of 9 Cr. DEMAND.

632. Survey of Recent Research in the Field of Health. Readings and discussion of recent

studies and authentic reports in various areas of health interest. 3 Cr. DEMAND.

637. Practicum I. Supervised experience in an off-campus setting peculiar to the student's needs. Prereq.: consent of instructor. 1 Cr. DEMAND.

638. Practicum II. Supervised experience in an off-campus setting peculiar to the student's needs. Prereq.: consent of instructor. 1 Cr. DEMAND.

639. Practicum III. Supervised experience in an off-campus setting peculiar to the student's needs. Prereq.: consent of instructor. 3 Cr. DEMAND.

696. Internship. Supervised agency clinical experience. 1-16 Cr. DEMAND.

699. Thesis. 6-9 Cr. F, W, S, SUM.

History (HIST)

B LAWRENCE HALL/255-3165

Chairperson: Edward Pluth

Graduate Faculty: Gambill, Gower, Gruver, R. Lewis, Massmann, Medler, Nayenga, Overy, D. Peterson, Pluth, Samarrai, Vaughter

Department policy statements on evaluation procedures, starred papers, and reading lists are available in the history office. Each student's progress is to be evaluated after the completion of 12 graduate credits. Students are to contact their adviser in the first enrollment period following completion of 12 graduate credits. Students are encouraged to obtain pertinent material no later than the first quarter of enrollment.

This program is designed for both full-time and part-time students. Full-time students must expect to complete part of their course load in evening classes.

NOTE: Students interested in the M.A. Public History track, proposed for Fall, 1988, should contact the department.

MASTER OF ARTS

An applicant for admission to this program must have earned a minimum of 24 credits in history beyond general education requirements and the undergraduate grade point average should be 2.8 or above. Others may be admitted conditionally. In some cases, the applicant may be required to complete additional undergraduate work even though a major or minor may have been completed.

Reading knowledge of a foreign language is not required but it may be needed. Many graduate schools offering doctorate programs in history prefer applicants who have completed a master's with a thesis.

Students pursuing a Master of Arts degree must earn a minimum of 15 GRADUATE ONLY credits in the program.

Plan A: Min., 45 Cr.

I. Courses in History: 36-39 Cr.

A. Prescribed:

HIST 699 Thesis, 9 Cr.

* HIST 578 Historical Criticism and Writing, 3 Cr.

* HIST 573 Historiography, 3 Cr.

B. Electives: 19-24 Cr. in History.

II. Cognate Courses: 6-9 Cr. in courses approved by adviser.

A student completing the Plan A program will be required to pass a final oral examination based on the thesis submitted to the Final Evaluation Committee.

Plan B: Min., 48 Cr.

I. Courses in History: 30-36 Cr.

A. Prescribed:

* HIST 578 Historical Criticism and Writing, 3 Cr.

* HIST 573 Historiography, 3 Cr.

Three starred papers written in conjunction with approved courses.

B. Electives: 22-30 Cr. in History.

II. Cognate Courses: 12-18 Cr. in courses approved by adviser.

A student completing the Plan B program will be required to pass a final oral examination based on the starred papers submitted to the final evaluation committee.

At the option of the department, candidates may also be required to complete a final written examination.

*These courses may be waived if the student has fulfilled these requirements as part of an undergraduate program.

MASTER OF SCIENCE

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution and must have completed at least an undergraduate minor in history in order to select it as a graduate major. In some cases, the applicant may be required to complete additional undergraduate work even though a major or minor may have been completed.

At least one-half of the Master of Science degree program must be earned in courses in which enrollment is limited to graduate students.

Plan A, 45 Cr.; Plan B, 48 Cr.

- I. Research: Min., Plan A, 9-15 Cr.; Plan B, 3-6 Cr.
HIST 578 Historical Criticism and Writing, 3 Cr.
HIST 699 Thesis, 6-9 Cr. (Plan A only)
- II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.
Credits to be selected with major adviser.
- III. Professional Education: Min., Plan A or B, 9 Cr.
Credits to be selected with approval of the professional education adviser.
- IV. Electives: Min., Plan A, 3-6 Cr.; Plan B, 9 Cr.

A student completing Plan A will be required to pass a final oral examination based on the thesis submitted to the final evaluation committee.

A student completing Plan B will be required to take a written comprehensive examination as a final evaluation. It is strongly advised that students take a historiography course (History 573) appropriate to their area(s) of concentration.

COURSE DESCRIPTIONS

533. Russia, 1700-1917. A survey of politics, diplomacy, society, economics, and culture in Russia from Peter the Great to the Revolution. 4 Cr. W.

534. Soviet Russia, 1917 to the Present. A historical survey of politics, society, economics, and culture in the Soviet Union. 4 Cr. S.

545. United States Military History. Military problems and accomplishments from 1775 to the present. 4 Cr. DEMAND.

548. U.S. Social and Intellectual to 1865. Puritanism, revivalism, early American political thought, economic values, agrarianism, reform movements, literary traditions, individualism, are among topics discussed. 4 Cr. DEMAND.

556. U.S. Foreign Relations from World War I. The U.S. as a world power; diplomatic policies in two world wars and their aftermath. 4 Cr. ALT.

558. The American West. Topical and chronological consideration of western land policy, territorial government; Indian policy, economic development. 4 Cr. ALT.

563. U.S.-Latin American Relations. General trends with emphasis on specific relations with selected Latin American countries or regions. 4 Cr. DEMAND.

573. Historiography. Readings and discussion of historians and historical interpretation. 3 Cr. DEMAND.

578. Historical Criticism and Writing. Problems in and methods of historical accuracy and consistency; references, chronology, availability of knowledge, historical "myths," and preparation of research papers and thesis. 3 Cr. DEMAND.

580. Seminar in American History. Intensive reading and research in one area or topic of U.S. or Latin American history. Limited to senior or graduate students. 3 Cr. May be repeated with different topic to max. of 9 Cr. DEMAND.

583. Seminar in European History. Bibliographical study, research, and discussion of a selected topic in European history. Limited to senior or graduate students. 3 Cr. May be repeated with different topic to max. of 9 Cr. DEMAND.

586. Seminar in Africa, Asia, or Middle East. Reading and research on a selected topic. (Africa, Asia, or Middle East.) Limited to senior or graduate students. 3 Cr. May be repeated with different topic to max. of 9 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

635. Readings in European History. Guided study through individual investigation of special periods and topics. 3 Cr. May be repeated with different topic to max. of 9 Cr. DEMAND.

640. Colonial America. Extensive study of themes in development of English colonies from Jamestown to U.S. Independence, e.g., the development of colonial society, culture, economics, politics, ideas, American Revolution. 3 Cr. DEMAND.

641. U.S. 1783-1848. Extensive study of topics such as Constitutional Convention, Federalists, Jeffersonians, Jacksonians, War of 1812, Manifest Destiny, and reform movements. 3 Cr. DEMAND.

642. U.S. 1848-1877. Extensive study of topics such as slavery, the Civil War, and Reconstruction. 3 Cr. DEMAND.

643. U.S. 1877-1920. Extensive study of such themes as agrarian protest, industrialization, growth of urban society, progressivism, and international involvement. 3 Cr. DEMAND.

644. U.S. 1920-1970s. Extensive study of the Jazz Age, the New Deal, World War II, and post-war U.S. 3 Cr. DEMAND.

651. Readings in American History. Guided study of American history through individual investigation of special periods and topics. 3 Cr. May be repeated with different topic to max. of 9 Cr. DEMAND.

662. Seminar in Ancient or Medieval History. Bibliographical study, intensive reading, discussion, research in selected areas or topics of European history to 1450. 3 Cr. May be repeated with different topic to max. of 9 Cr. DEMAND.

664. Seminar: European History. Bibliographical study, reading in documents and secondary works, analysis and discussion, research in selected topics or areas. 3 Cr. May be repeated with different topic to max. of 9 Cr. DEMAND.

681. Seminar in American History. Intensive reading and research in one area or topic of U.S. or Latin American history. 3 Cr. May be repeated with different topic to max. of 9 Cr. DEMAND.

699. Thesis. 6-9 Cr. F, W, S.

Human Relations (HURL) and Multicultural Education

B118 EDUCATION BUILDING/255-3124

Director: Julie Andrzejewski

Graduate Faculty: Andrzejewski, Downes, Hellwig, Risberg

The human relations program provides training in self-awareness and skills essential for living and teaching in a pluralistic society. Courses are available for those planning to enter education and public service positions in government, health care, business, and industry. These courses are designed to enable participants to enhance their effectiveness in analyzing how power, resources, cultural standards, and institutional practices and procedures are used to perpetuate the oppression of various groups in society, and how people may be effective in creating social and institutional change.

Other objectives include (1) an understanding of the contributions and life styles of the various racial, cultural, and economic groups in society; (2) recognizing and dealing with dehumanizing biases, discrimination, and prejudices; (3) creating learning environments which contribute to the self-esteem of all persons and to positive interpersonal relations; (4) respecting human diversity and personal rights.

The center currently does not offer a graduate major. Service courses for other graduate programs are offered in both the daytime and evening schedules.

COURSE DESCRIPTIONS

509. Ageism. Analysis of how cultural standards and institutional practices lead to the oppression of people in this society based on age. 4 Cr. F.

550. Nonverbal Communication and Education. The role of nonverbal communication in human interaction. Includes analysis of environmental factors, physical appearance, body language, touching behavior and paralanguage. 3 Cr. DEMAND.

591. Change Agent Skills. Practical skills for producing institutional change in education and related areas. Prereq.: 201 or 496, 497. 4 Cr. W or S.

596. Human Relations and the Teacher Part I. Part I of program to meet teacher licensure rule 3.041. The focus is upon parts bb, cc and dd of the state requirement. Coreq.: 597. 3 Cr. F, W, S.

597. Human Relations and the Teacher Part II. Part II of the program to meet teacher licensure rule 3.041. The focus will be upon part aa of the state requirement. Coreq.: 596. 3 Cr. F, W, S.

598. Application of Theory for Developing Moral Reasoning. Various theories on moral development will provide the basis for integrating moral education into school curriculum. The course will focus upon understanding Kohlberg's structural-developmental theory and developing the skills for utilizing the theory. 4 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

608. Children's/Student's Rights. An analysis of problems related to the oppression of young people/students. 4 Cr. DEMAND.

614. Administration of Multicultural Education. Prepare administrators to provide leadership in helping their institutions and personnel to become more responsive to the human condition, individual cultural integrity, and cultural pluralism in society. 2 Cr. F or S.

629. Introduction to the Human Relations Profession. An overview of the background and professional application of human relations. 2 Cr. F.

680. Internship in Human Relations. Supervised experiences with selected agency school, organization, etc., that has a primary goal to facilitate the improvement of human relationships between individuals and groups. 3-9 Cr. DEMAND.

681. A Seminar in Practical approaches for Providing Human Relations Instruction. This seminar will focus upon various techniques for facilitating human relations education. It will be sub-divided into two main components: (1) facilitating group leadership, techniques in intergroup, interracial and non-sexist communications; and (2) instructional techniques in the study of human relations issues. 4 Cr. W.

682. Application of Theory and Methods in Human Relations. The seminar will examine human relations methodology including an analysis of various teaching theories, teaching strategies, materials and evaluation instruments. Emphasis will be upon developing skills in human relations program facilitation. 4 Cr. F.

Industrial Studies (IND)

205 HEADLEY HALL/255-2107

Chairperson: Anthony E. Schwaller

Graduate Faculty: Bergstrom, Bjorklund, Carter, Gilberti, Horton, Lacroix, Nestel, Schwaller

MASTER OF SCIENCE

An applicant for admission to the Master of Science degree in Industrial Studies must meet the following requirements:

1. A baccalaureate degree from an accredited college or university.
2. A Minnesota Vocational Teacher License in Industrial Education or have completed an undergraduate industrial teacher education program from an accredited teacher preparation institution.
3. An acceptable score on the Graduate Record Examination and/or acceptable undergraduate scholarship.

In some cases, it may be necessary for the applicant to complete some prerequisite undergraduate work even though the student may have an undergraduate major or minor.

At least one-half of the Master of Science degree program must be earned in courses in which enrollment is limited to graduate students.

This program is designed for both full-time and part-time students. Full-time students must expect to complete a majority of their course load in evening classes.

Plan A, 45 Cr.; Plan B, 48 Cr.

- I. Research: Min., Plan A, 9-15 Cr.; Plan B, 3-6 Cr.
ED 615 Introduction to Research, 3 Cr.
IND 699 Thesis, 6-9 Cr. (Plan A only)

- II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.
A. Select 3 of the following 4 (12 Cr.)
IND 604, 650, 668, 673
B. Select 1 of the following 4 (3 Cr.)
IND 632, 640, 665, 683
C. Electives: Plan A (3 Cr.), Plan B (9 Cr.)
Track 1—General: IND 531, 553, 595, 598, 604, 615, 632, 640, 650, 665, 668, 673, 683, 695
Track 2—Vocational: IND 515, 517, 518, 531, 553, 595, 598, 604, 615, 650, 668, 673, 695
III. Professional Education: Min., Plans A and B, 9 Cr.
Credits to be selected with approval of the professional education adviser.
IV. Electives: Min., Plan A, 3-9 Cr.; Plan B, 9-12 Cr.

COURSE DESCRIPTIONS

515. Vocational Guidance. Acquisition, development, and the dissemination of occupational and guidance information. 3 Cr. SUM ALT.

517. Organization and Administration of Industrial Education. Organization and administration of secondary, post-secondary, adult, and special needs classes. 3 Cr. W ALT.

518. Conference Leading. Techniques and practices employed in leading and participating in conferences. 3 Cr. W ALT.

530. Mass Production in Wood. Care and use of woodworking machines and special hand tools. Mass-production aspect of woodworking machines. Activity of class based upon a group project whenever possible. Lab. 4 Cr. S ALT.

531. Evaluation in Industrial Subjects. Processes of evaluation and problems of measuring achievement in industrial-technical areas. Selection, development and validation of evaluative instruments and techniques. 3 Cr. S ALT.

536. Construction Scheduling and Estimating. Introduction to preliminary, detail, and quantity estimating. Scheduling techniques. Emphasis on residential and small commercial projects. 4 Cr. F ALT.

553. Individualized Instruction. Utilizing individualized instruction for designing new courses or converting existing ones to an individualized learning approach. Emphasis will be placed upon techniques and the use of media. 3 Cr. F ALT.

598. Internship. Offered only to students who hold internships with industrial organizations for which advanced approval has been given by the department. 1-8 Cr. May be repeated; however, a max. of 8 Cr. will count toward a graduate degree. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

601. Technology and the Individual. Effects of invention and technological development on society with implication for general education. Not open to industrial studies majors. 3 Cr. S ALT.

604. Innovations and Contemporary Problems. Current technological innovations, issues and events and their interrelationship to contemporary problems that face today's society. 4 Cr. W ALT.

615. Seminar. Seminar presentation on a selected industrial education topic. Permission of department required. May be repeated to max. of 9 Cr. 1-4 Cr. F.

632. Technical Problems in Communications: (Topical) . Technical study for specialists in communications. Recent developments, experimentation and technical reports. May be repeated to max. of 6 Cr. 3 Cr. SUM ALT.

640. Technical Problems in Manufacturing: (Topical) . Technical study for specialists in manufacturing. Recent developments, experimentation and technical reports. May be repeated to max. of 6 Cr. 3 Cr. F ALT.

650. Contemporary Instructional Strategies in Industrial Education. In depth study and examination of innovative teaching strategies and their applications in industrial education. Students will identify, discuss, and apply selected strategies. 4 Cr. W ALT.

665. Technical Problems in Construction: (Topical) . Technical study for specialists in construction. Recent developments, experimentation and technical reports. May be repeated to max. of 6 Cr. 3 Cr. F ALT.

668. Current Literature and Research. Analysis of literature of the industrial field, with special attention to individual readings and reports, implications of such literature for current problems in industrial education. 4 Cr. S ALT.

673. Leaders and Movements in Industrial Education. Contributors to development of industrial education with special attention to economic, social and philosophical factors motivating this development. 4 Cr. S ALT.

683. Technical Problems in Transportation/Energy: (Topical) . Technical study for specialists in transportation/energy. Recent developments, experimentation and technical reports. May be repeated to max. of 6 Cr. 3 Cr. S ALT.

699. Thesis. 6-9 Cr. DEMAND.

Information Media (IM) 114 CENTENNIAL HALL/255-2022

Director: John Berling

Graduate Faculty: Berling, Fields, Hauptman, Hill, Koyama, P. Lacroix, J. Nelson, Rydberg, C. Savage, Smelser

The Center for Information Media has developed Master of Science and Specialist degree programs in information media to support persons in educational communications, information technologies, and in human resources development/training. Encompassed in the programs are competency development in the theory and practice of librarianship, audiovisual education, and message design and delivery. Basic to these programs are such library media management functions as selection, evaluation, acquisition, processing, organizing, and supervision of informational materials. Also, the incorporation of current and developing technologies into these management functions and into message design and delivery are an essential characteristic of the graduate program. It is recommended that IM 606 or IM 607 be taken within the first enrollment and prior to completion of 15 credits.

SPECIALIST DEGREE-Information Media

The Specialist degree program is available to: (1) those who have completed a master's degree with a major in some area of educational media and information technologies (library or audiovisual education), (2) those who have completed a minimum of 45 graduate credits in some area of media but who have not completed a master's degree yet are eligible for entrance into a master's degree program under present entrance requirements or (3) those who have a master's degree in another area. Each student's program will be designed to meet the individual's interests and needs.

The specific goals of the Specialist degree program are to develop competencies necessary for media supervisor licensure; to develop a background and depth in one or more areas in addition to a more general background which a master's degree may offer; to prepare a student for administrative positions in public, academic or school district media programs; to help students meet requirements for advancements in position or salary schedules which may require an advanced degree and to offer an opportunity for in-depth study of a problem through the field study.

With the exception of those students who have completed a master's degree in information media at St. Cloud State University, all students will be required to take the Graduate Record Examination. A minimum grade point average on all graduate work is 3.0. References also are required.

Specialist Degree Program: Min., 45 Cr.

- I. Major: Min., 33 Cr. (The student must have a minimum of 60 graduate credits of media.)
IM 683 Seminar in Information Media, 2 Cr.
IM 684 Field Study, 3-9 Cr. Credits selected with the consent of the adviser.
- II. Electives: Min., 12 Cr. Selected with the consent of the adviser.

MASTER OF SCIENCE-Information Media

Programs are available for students who hold a baccalaureate degree. Encompassed in the information media major are concepts dealing with materials management and message design. Majors in this area are expected to attain competency in the theory and practice of selection, evaluation, acquisition, preparation, organization, and supervision of information materials through a prescribed core of course work. Current and developing technologies are incorporated into management functions and into message design and delivery.

Candidates are required to successfully complete a comprehensive final examination, including an oral portion, based on the major material covered in their individual programs.

Program One: Information Technologies:

Plan A, 48 Cr.; Plan B, 51 Cr.; Plan C, 54 Cr.

Program One is designed for persons interested in gaining competencies leading to a career in special, public, or private libraries and media centers, where licensure is not required. This program permits students a high level of discretion in the selection of courses. (Changes are anticipated in this program. Please contact the Center.)

This program is designed for both full-time and part-time students and can be completed through regular evening instruction. It can also be completed through summer quarter attendance.

- I. Research: Min., Plan A, 9 Cr.; Plan B or C, 3 Cr.
IM 608 Research Methods
IM 699 Thesis (Plan A only), 6 Cr.
- II. Major: Min., Plan A, 24-33 Cr.; Plan B, 30-36 Cr.; Plan C, 18-24 Cr.
Required core to include IM 575, 576, 577, 578, 603, 606 (or equivalent), 639, 644, and 682 plus other credits to be selected with an adviser.
- III. Applications and Implementations: Plan C only, 15 Cr.
- IV. Electives: Min., Plan A, 3-6 Cr.; Plan B or C, 6-12 Cr.
Credits to be selected from related fields, general study courses, Introduction to Graduate Statistics, Interpretation of Research, or the major.

Program Two: Educational Media:

Plan A, 48 Cr.; Plan B, 51 Cr.; Plan C, 54 Cr.

Program Two incorporates all of the competency requirements leading to licensure as a media generalist, the program is specifically structured for persons desiring a career in the public schools. To be eligible, students must hold a baccalaureate degree with a current teaching license.

This program is designed for both full-time and part-time students and can be completed through regular evening instruction. It can also be completed through summer quarter attendance.

- I. Research: Min., Plan A, 9 Cr.; Plan B or C, 3 Cr.
IM 608 Research Methods
IM 699 Thesis (Plan A only), 6 Cr.
- II. Major: Min., Plan A, 24-33 Cr.; Plan B, 30-36 Cr.; Plan C, 18-24 Cr.
Required core to include IM 512, or 573, 571, 575, 576, 577, 578, 603 (or equivalent), 606, 639, 644, 682 plus other credits to be selected with an adviser.
- III. Applications and Implementations: Plan C only, 15 Cr.
- IV. Professional Education: Min., 9 Cr.
Prereq.: undergraduate or graduate curriculum course on level for which student has teacher licensure in addition to the required 9 credits. Recommended courses to include PSY 663, ED 646, or ED 647 plus other credits to be selected with an adviser.
- IV. Electives: Min., Plan A, 3-6 Cr.; Plan B or C, 6-12 Cr.
Credits to be selected with adviser from related fields, general studies courses, Introduction to Graduate Statistics, Interpretation of Research or courses in the major.

Program Three: Human Resources Development/Training:

Plan A, 48 Cr.; Plan B, 51 Cr.; Plan C, 54 Cr.

Program Three, an Information Media masters degree in training and development, is for those interested in organizational media management in business, industrial, governmental, and health fields. The degree is designed to prepare an individual with such competencies as problem analysis, program development, resource management, and personnel/performance evaluation. Program Three gives students a basic framework for undertaking a training position, while at the same time developing the specific skills necessary for the field.

This program is designed for both full-time and part-time students. Completion requires attendance in some daytime classes, although most courses will be offered through regular evening instruction. This program can NOT be completed through summer quarter attendance alone.

- I. Research: Min., Plan A, 9 Cr.; Plan B or C, 3 Cr.
IM 608 Research Methods, 3 Cr.
IM 699 Thesis (Plan A only), 6 Cr.
- II. Major: Min., Plan A, 24-33 Cr.; Plan B, 30-36 Cr.; Plan C, 18-24 Cr.
Required core to include IM 512, 536, 571, 583, 603, 607, 658, 675, 680 plus other credits to be selected with an adviser.
- III. Applications and Implementations: Plan C only, 15 Cr.
- IV. Related Fields: Min., Plans A, B, or C, 12 Cr.
Required courses include: MGMT 361 (501), PSY 678, and SPC 520. Other courses may include PSY 582, 663, 668, MKGB 524, HURL 682, MGMT 567, 370 (501).
- V. Electives: Plan A, 3-6 Cr.; Plan B or C, 6-12 Cr.

STUDENTS SEEKING LICENSE ENDORSEMENT

Students with baccalaureate degrees who have teacher licensure or are eligible for teacher licensure may apply for admission to pursue license endorsement as school librarians, audiovisual directors, or media generalists. Students with teacher licensure and a master's degree may apply for admission to pursue license endorsement as media supervisors. Minnesota licensure endorsements require the following experience in addition to the course requirements:

Media Generalist-two years

Media Supervisor-three years in the area of media while holding licensure valid for the position in which the media experience was obtained.

The Media Generalist Licensure Program requires a minimum of 36 credits. Prereq. include courses in curriculum and an introduction to information media. Recommended courses to include IM 512, or 573, 571, 575, 576, 577, 578, 606, 639, 644, PSY 663, and ED 646 or 647.

The Media Supervisor Licensure Program requires a minimum of 18 credits beyond the master's degree and the Media Generalist level. Recommended courses include IM 606, 651, EDAD 674, and PSY 663, however, the program will be individually tailored when necessary.

Applicants planning to work toward any license endorsement should meet with a graduate adviser in the Center for Information Media to plan the sequence of courses required. Additional information may be obtained from the Director of the Center for Information Media, St. Cloud State University.

PERMANENT WORKSHOP DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to page 27 to determine the maximum number of workshop credits which may be applied to graduate degrees.

531. Introductory Workshop to Online Literature Searching. Techniques of user-computer interaction for retrieval of bibliographic information using the Bibliographic Retrieval Services databanks. Offered one quarter per year. Fees assessed per database(s) searched. 2 Cr. DEMAND.

532. Administrative Uses of a Microcomputer in Schools, Media Centers, and Libraries. How to apply a microcomputer and related software for data management purposes. Will explore both generic and dedicated software packages. Prereq.: knowledge of micro-computer operations. 1 Cr. DEMAND.

COURSE DESCRIPTIONS

512. Television in Media. The operation and use of television in the instructional program. Lab. 3 Cr. F, SUM.

516. Television in Media II. Planning, preparation, editing and evaluation of television programming including administering programs and facilities, writing, lighting, staging, and graphics. Prereq.: 412 or 512. 3 Cr. W.

531. Introductory Workshop to Online Literature Searching. Techniques of user-computer interaction for retrieval of bibliographic information using the Bibliographic Retrieval Services databanks. Offered one quarter per year. Fees assessed per database(s) searched. 2 Cr. DEMAND.

536. Business Information Resources. Explores sources of business information available in published formats issued by the business and financial community and various government agencies, as well as business information accessible through the computer and related media. Directed primarily to business students and others associated with the business community in an information capacity. 3 Cr. F, S.

545. Microcomputers in Classrooms and Media Centers. Instructional applications, utilization, and management of microcomputers in educational settings. Survey of available hardware, software, and related instructional materials. 3 Cr. F, W, S, SUM.

571. Preparation of Media. Designing, producing, and utilizing projected and nonprojected materials for instructional use. Lab. 3 Cr. W, S, SUM.

573. Photography in Media. Basic photographic processes in media, including still photography, black and white darkroom processes, and the operation of equipment. Lab. 3 Cr. F, S, SUM.

574. Slide Photography in Media. A course on the fundamentals of slide photography for audiovisual presentations. Topics include: materials and equipment, compositional guidelines, scripts and shot lists, studio and on-location techniques, close-up photography, slide duplication, title and graphic slide production, legalities and ethics. Lab. processing of color film not included.

Prereq.: 473 or 573 or permission of instructor. 3 Cr. DEMAND.

575. Administration of Media. Basic theory and techniques of administering media programs and service. It is recommended that this course be taken during the latter part of the IM core. 3 Cr. S, SUM.

576. Selection and Evaluation of Media. The selection of media materials, including theory, principles, techniques, and basic tools. 3 Cr. F, SUM.

577. Reference and Bibliography in Media. Reference and bibliographic works, including theory, practice, tools and bibliographies. 3 Cr. W, SUM.

578. Technical Processes in Media. The basic processes for acquiring, cataloging, classifying, and organizing materials. Lab. 3 Cr. S, SUM.

582. Audio Systems. Lecture and demonstration of the theory and application of sound reproduction techniques to support system planning, component selection, system expansion, and component purchasing for monophonic and polyphonic systems. Lab. 3 Cr. W.

583. Color Slide Presentations. Visual literacy approach to preparing color slides, and slide/tape presentations for information display, documentation, and instruction. Presentation design, selection of materials and format, and equipment utilization are included. Laboratory processing of photographic materials is not included. 3 Cr. F, S.

593. Black and White Photographic Techniques. A continuation of the black and white portion of 473-573 with emphasis on controls for composition, lighting, contrast, and sharpness in both the negative and the print. Attention will also be given to selection and organization of equipment and facilities. Prereq.: 473-573 or permission of instructor. 3 Cr. S.

COURSES FOR GRADUATE STUDENTS ONLY

603. Information Media: Theory, Research, and Practice. Overview of the nature, forms, and uses of information media. Survey of emphasis areas within the Information Media field examined from the perspective of recent research and influential theories. Introduction to professional literature, organizations, and opportunities. 3 Cr. F, SUM.

604. Information Media in Society. The role of media, personnel, and organization in society; a study of materials of library and audiovisual service. (A general course for graduate students; not open to information media majors.) 3 Cr. DEMAND.

606. Organization and Supervision of Media. An introductory survey of the various facets of organization and supervision of media resources in library and audiovisual services. 3 Cr. F, SUM.

607. Training/Human Resource Development. Study of training/human resource development: divisions, organizations, professionals, and literature. Examination of the theories of learning, motivation, and communication as they relate to training and development. Study of the associated practitioner roles: systems design, message design and development, training and problem needs, analysis, and strategies. 3 Cr. F.

608. Research Methods in Media. Methods of evaluating research procedures and interpreting findings. Defining and limiting a problem, gathering, documenting, organizing, and presenting findings. 3 Cr. W, SUM.

615. Preparation of Media II. Planning and preparing materials for instructional use; graphics, lettering, and overhead transparencies. Lab. Prereq.: 471-571 and 473-573 or permission of instructor. 3 Cr. DEMAND.

619. Motion Picture in Media. Planning and producing instructional films, including 8 mm, 16 mm formats, script writing, equipment operation, lighting and selection of suitable messages for this medium. Lab. 3 Cr. DEMAND.

631. Selection and Evaluation of Media II. Theory, principles, and techniques of evaluating and selecting materials and equipment used for formats of media. Prereq.: 476-576. 3 Cr. DEMAND.

636. Reference and Bibliography in Media II. Theory of patron information needs, study of specialized bibliographic and reference media materials in subject areas. Prereq.: 477-577. 3 Cr. DEMAND.

638. Technical Processes in Information Media II. Continuation of the study of information media materials organization with emphasis on the use of Library of Congress classification schedules and subject headings, administrative considerations in larger operations, and computer-stored bibliographic data. Lab. Prereq.: 478-578. 3 Cr. DEMAND.

639. Reading, Listening and Viewing Guidance. Materials of varying formats (book and non-book) used by children and youth in the learning process, with an emphasis on application. 3 Cr. W, SUM.

644. Information Storage and Retrieval. Principles of information storage and retrieval with emphasis on needs of the media center. Analysis of processing systems, manual punch-card and computer application. Lab. 3 Cr. S, SUM.

646. Microcomputer Software. Selection, evaluation, and processing of microcomputer programs and documentation; sources, techniques, and media center management of software. Prereq.: 545 or equivalent. 3 Cr. F, S, SUM.

647. Instructional Development and Design for Microcomputers. The theoretical

background of instructional programs including microcomputer programs and software; the selection, utilization, and evaluation of existing programs; and individual experience in planning, designing and producing programs. Prereq.: 545, 658, or permission of instructor. 3 Cr. DEMAND.

651. Administration of Media II. Application of the principles of administrative patterns, personnel management, public relations, budgeting and facilities to a media program. Prereq.: 475-575 or permission of instructor. 3 Cr. DEMAND.

658. Systems Design and Evaluation of Media. Principles in systematic design of instruction; using and evaluating media systems; practice in designing and using media models in relation to specific needs. Lab. 3 Cr. S, SUM.

660. History of Media. A chronology of events and circumstances in the development of libraries and other information media. 3 Cr. DEMAND.

662. Recent Trends in Media. Consideration of the latest trends of thinking in the various areas of media handling and use. 3 Cr. DEMAND.

675. Organizational Training and Media Management. Study of the theories, philosophy, and praxiology of training/human resource development organizations, operations, research, and public/personnel relations. Investigation of advanced readings and theories of data management and long-range planning as it relates to training/human resource development practitioners in their development of media management, training management, and operations management. 3 Cr. S.

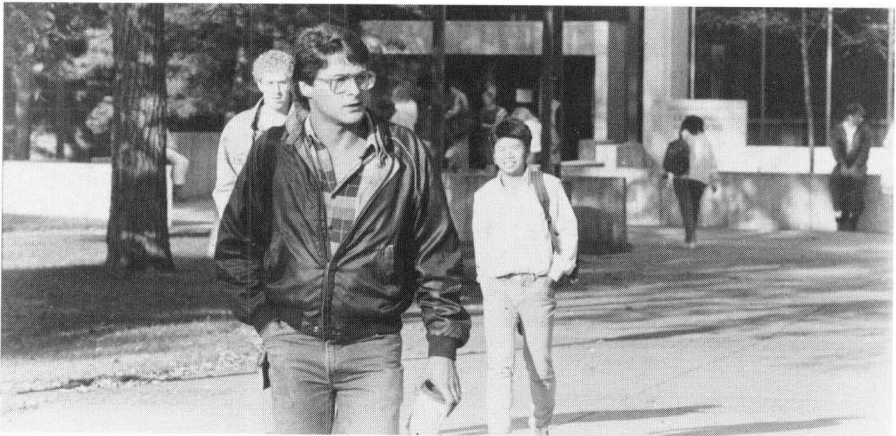
680. Internship in Media. Intern experiences relating to media in all its practical facets. Lab. 2-12 Cr. F, W, S, SUM.

681. Readings in Media. Selected readings of literature of the field and related areas. 1-3 Cr. F, W, S, SUM.

682. Research in Media. Current experiments in media and closely related fields. 2-12 Cr. F, W, S, SUM.

683. Seminar in Media. Conferences, reports, readings, discussions, problems, and research in a special facet of media. 1-4 Cr. May be repeated to max. of 9 Cr. F, W, S, SUM.

684. Field Study in Media. (For Specialist degree only.) Research problem(s) developed by the student with permission of the adviser and the department chairperson. 3-9 Cr. F, W, S, SUM.



Interdisciplinary Studies

205 STEWART HALL/255-2248

Chairperson: Dena Shenk

Graduate Faculty: Downes, Haniff, Hellwig, Morgan, Redd, Robertson, Shenk, E. Simpson, Wolfer

The Department of Interdisciplinary Studies has general responsibility for the administration of Social Science and Social Studies programs and for the following broad interdisciplinary programs: American Studies, East Asian Studies, Futures Studies, Gerontology, International Relations, Latin American Studies, and Local and Urban Affairs. In addition, each of the latter programs has a director and a program advisory committee.

For information on graduate offerings, see American Studies, Gerontology, Social Science, and Social Studies.

Management and Finance (MGMF)

104 BUSINESS BUILDING/255-3225

Chairperson: Dwaine Tallent

Graduate Faculty: Burnes, Farrell, Karvel, Petersen, Saraph, Sebastian, Skalbeck, Tallent, Thomas, Vora,

Also see M.B.A. requirements, pages 32-34

COURSE DESCRIPTIONS

538. International Business Seminar. The course is designed to serve as an integrated capstone for international business. It includes understanding of the problems faced by international business, policy and decision-making processes as well as control and evaluation of international business. Prereq.: 470, 473; MKGB 427. 4 Cr. S.

560. Problems in Personnel Administration. Research and analysis of selected personnel problems: wage and salary administration, job satisfaction, supervision, and current issues in manpower utilization. Students undertake a research project in a personnel problem area of their choice. Prereq.: 362. 4 Cr. F.

561. Collective Bargaining. Analysis of bargaining processes; legislative and administrative requirements applicable to unions, managements and employees; development and evaluation of collective bargaining agreements. 4 Cr. W.

563. Production and Inventory Control. Management control practices including production planning relative to engineering; production control including routing, scheduling and dispatching; manpower requirements; the interaction of decision-making processes. 4 Cr. F.

564. Purchasing and Materials Management. Principles, procedures, and methods for providing materials and services within the broad concept of complete management of the flows of materials. 4 Cr. W, S.

566. Compensation Theory and Practice. An analysis of compensation theories and practices; their effect on employee motivation, productivity, and morale. Both monetary and non-monetary compensation systems are examined. 4 Cr. S.

567. Organization Theory. To survey and increase understanding of the structures, processes, and outcomes of organizations. 4 Cr. F, W, S, SUM.

571. Corporate Financial Policies. Examination and analysis of financial concepts relative to: corporate financial decision making; adjustments to changing conditions; market structure and corporate capital instruments; capital market movements and financial decisions. 4 Cr. F.

572. Financial Institutions. Examination and analysis of various financial institutions and their role in the field of finance: commercial banks; savings and investment institutions; personal finance companies; investment intermediaries. 4 Cr. W.

573. International Finance. Examination and analysis of international financial concepts, principles, and practices. Includes analysis of international balance of payments, foreign exchange markets and risk factors, financing of international trade and multinational enterprises, capital budgeting analyses, and international financial (stocks, bonds) markets. 4 Cr. DEMAND.

574. Security Analysis. Classification and analysis of securities, markets, industries; investment policies; management of portfolios of institutional investors. 4 Cr. S.

575. Life and Health Insurance. Examination and analysis of: individual life and health contracts; group life; pension plans; estate planning; annuities and equity funding. 4 Cr. F.

576. Property and Liability Insurance. Examination and analysis of: insurable property and liability risk; contract analysis; insurance law; rates and reserves; types of property and liability insurances; optimum insurance programs. 4 Cr. S.

COURSES FOR GRADUATE STUDENTS ONLY

605. Business Seminar. Selected topics related to (1) management; (2) finance; or (3) insurance and real estate. 4 Cr. DEMAND.

665. Readings in Management. Special readings in the subject area. 4 Cr. DEMAND.

672. Readings in Finance. Special readings in the subject area. 4 Cr. DEMAND.

675. Readings in Insurance and Real Estate. Special readings in the subject area. 4 Cr. DEMAND.

Marketing and General Business (MKGB)

304 BUSINESS BUILDING/255-2057

Chairperson: Robert Benson

Graduate Faculty: Benson, Buchanan, Calhoun, Hanafy, J. Johnson, J. Larson, Rodgers, Royalty, Schneider, Wells

Also see M.B.A. requirements, pages 32-34

COURSE DESCRIPTIONS

520. Retailing Management. Organization for retailing and functional activities involved; problems of inventory methods, credit and collections, personnel, location, layout, receiving, and delivery. 4 Cr. S.

521. Product Planning and Development. The role of product planning and development in marketing decision-making; product planning concepts and models; product planning process; practical experience through case analysis. Prereq.: 320. 4 Cr. W.

522. International Trade for Small Business. The course covers basic international trade management planning and the functions and responsibilities of export and import managers. The course is directed to small business and examines major aspects of imports and exports. Prereq.: 320. 4 Cr. W.

523. Advertising Management. Analysis of advertising policies and practices in campaign planning, media selection, client-agency relationships, research and testing. Consent of department chairperson. 4 Cr. W.

524. Sales Management. Managerial aspects of sales promotion, problems involved in investigations of markets, planning sales effort, management of sales personnel, and control of sales operations. Consent of department chairperson. 4 Cr. W.

525. Marketing Research. Research process as an aid to decision-making in marketing management; research methodology, presentation of marketing research results, evaluation of the effectiveness of marketing research. Prereq.: BCIS 141. 4 Cr. F, W, SUM.

526. Marketing Systems. An introduction to the system concept in the analysis of marketing activities; system theory and its application to marketing with emphasis on the explanation of varying approaches to marketing systems, such as ecological, institutional, and social physics; development of marketing systems. 4 Cr. W ALT.

527. International Marketing. Stresses the importance of international marketing to the American economy and analyzes the United States international marketing with emphasis on the problems and practices of managing international marketing activities; analysis of characteristics, structure, and competitive factors of international markets. 4 Cr. F, W.

531. Transportation Management. A survey course dealing with the role of transportation in the marketing system; economic characteristics of the transport modes; theory of rates and rate structure; regulation; and national transportation policy. Prereq.: 320. 4 Cr. S.

532. Marketing Channels. An examination of alternative marketing channels connecting producer and consumer. The characteristics of different marketing institutions are examined and recent trends in channels and institutions are considered. Prereq.: 320. 4 Cr. W.

533. Marketing Logistics. Provides an overview of physical distribution and logistics management. Topics include: transportation, storage, inventory control, order processing and location decision making. Prereq.: 320. 4 Cr. F.

534. Social Marketing. The course deals with marketing decisions and strategies in relation to contemporary social changes in the society. The course entails dimensions of social changes, ecological and environmental changes, social values and ethics, shortages of energies, role of women in society, food marketing and health questions, and social and ethical responsibilities. Prereq.: 320. 4 Cr. W ALT.

535. Marketing for Non-Profit Organizations. Application of marketing philosophy, concepts and techniques to non-business organizations related to the public. The course contains the analysis of non-business organizations in respect to market structure and market behavior. Marketing strategies and planning for health care, public sector, political ideas and persons, religious institutions, education and service marketing. Prereq.: 320. 4 Cr. F ALT.

537. Business Law. Policy and rationale of the law of property, trusts and estates, insurance, agency, partnerships, corporations, securities regulation and anti-trust. 4 Cr. F, W, S, SUM.

538. International Business Seminar. Designed to serve as an integrated capstone for international business. Includes understanding of the problems faced by international business, policy and decision-making processes as well as control and evaluation of international business. Prereq.: 427; MGMT 470, 473. 4 Cr. S.

545. International Business Law. Introduction to the legal aspects of international private trade transactions from inception to completion including documentation, performance, rights, duties, and U.S. and foreign governmental restrictions. Prereq.: 235 and 436. 4 Cr. W.

COURSES FOR GRADUATE STUDENTS ONLY

605. Business Seminar—Marketing. Selected topics related to marketing theory and practice. Consent of instructor required. 4 Cr. DEMAND.

626. Readings in Marketing. Special readings in the subject area. Consent of department chairperson. 1-4 Cr. DEMAND.

633. Business Case Analysis. Independent research culminating in written and/or oral presentation. 1-4 Cr. DEMAND.

Mass Communications (COMM)

102 COLBERT SOUTH/255-3293

Chairperson: Francis Voelker

Graduate Faculty: DeSanto, Habte, Vadnie

The department does not currently offer a major program. Service courses for other graduate programs are offered primarily in the daytime schedule. Some courses may be offered in the evening or summer schedule.

PERMANENT WORKSHOP DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to page 27 to determine the maximum number of workshop credits which may be applied to graduate degrees.

587. Workshop: Public Relations Practices and Production. The study and solution of public relations problems using the four-step public relations process. Emphasis is on media production of various public relations projects. Prereq.: 220; 240 or 272; 320, 350, 486 or consent of instructor. 4 Cr. S, SUM.

COURSE DESCRIPTIONS

541. Magazine Article Writing. Varied special types of writing for magazines, newspapers, journals, company publications, other printed media. Market study: adapting style, content to specific publications. 3 Cr. DEMAND.

545. Advanced Photojournalism. Lecture and lab in photojournalistic production for newspapers, magazines, company publications, television, etc. Photojournalism history, theory, trends, legal aspects, ethics, composition, special techniques, development and execution of picture stories and essays. Prereq.: 346 or consent. Departmental approval. Majors/minors only. 3 Cr. DEMAND.

550. Advanced Editing and Makeup. Current trends in format, makeup and typography of newspapers, magazines and brochures; editing and makeup of special sections; attention to solutions of problems by outstanding publications. Prereq.: 350. 4 Cr. W, S.

560. Mass Communications Law. Freedom of the press with emphasis on the electronic and print media in the areas of First Amendment rights; libel, privacy, access to information, censorship and government regulations; major theories of the press. Prereq.: 220; 240 or 272; 320. 4 Cr. F, W, S.

580. Advising School Publications. Role of the faculty adviser; trends, philosophies, problems; theoretical and practical considerations; content of journalism-mass communications curriculum. 4 Cr. DEMAND.

581. Teaching Mass Communications. Theories, methods, materials and curriculum developments for teaching mass communications in the secondary schools. 3 Cr. DEMAND.

586. Public Relations Methods and Principles. Interpreting the school, business or other organization for its publics; responsibilities of the public relations representative to the community served; the overall public relations program. Prereq.: 220, 240 or 272, 320 or consent of instructor. 4 Cr. F, W.

Mathematics (MATH) and Statistics (STAT)

139 ENGINEERING AND COMPUTING CENTER/255-3001

Chairperson: Gail Earles

Graduate Faculty: Bahauddin, Bird, Brink, Buls, Carlson, R. Earles, C. Ernst, Kalia, Keith, Kepner, Lahren, Leitch, Leung, Robinson, Van Akin

These programs are designed primarily for part-time students. Most graduate courses are offered only in evenings or summer sessions.

MASTER OF ARTS—Mathematics

The applicant for admittance to the M.A. program must have a bachelor's degree from an accredited college or university, with a major in mathematics and an overall grade point average of at least 2.8 with an average of 3.0 in the major. Students may be admitted provisionally. Final decision on admission will be made by the mathematics graduate faculty after consideration of entrance examination scores, undergraduate record, and letters of recommendation. At least 15 credits in the program must be earned in courses in which enrollment is limited to graduate students.

Plan A, 45 Cr.; Plan B, 48 Cr.

I. Credits in Mathematics:

Plan A. A minimum of 36 quarter hours including a thesis must be earned in mathematics. Two graduate-only year-long sequence courses in mathematics must be included in the 36-hour requirement.

Plan B. A minimum of 39 quarter hours must be earned in mathematics. Two graduate-only year-long sequence courses in mathematics must be included in the 39-hour requirement.

II. Cognate Areas:

A maximum of 9 quarter hours may be taken in a related area acceptable to the student's adviser.

A final written examination must be successfully completed by all Plan B candidates. In addition, an oral examination may be required at the option of the mathematics graduate faculty. Both a final written and a final oral examination must be successfully completed by all Plan A candidates. The oral examination will include a defense of thesis.

MASTER OF SCIENCE—Mathematics

An applicant for the M.S. degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution, and must have completed at least an undergraduate minor in mathematics. In some cases, the applicant may be required to complete additional undergraduate work.

At least one-half of the Master of Science degree program must be earned in courses in which enrollment is limited to graduate students.

Plan A, 45 Cr.; Plan B, 48 Cr.

I. Research: Min., Plan A, 9-15 Cr.; Plan B, 3-6 Cr.

ED 615 Introduction to Research, 3 Cr.

MATH 699 Thesis, 6-9 Cr. (Plan A only)

II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.

This program is being reviewed and revised. Contact the Department of Mathematics and Statistics for current requirements.

III. Professional Education: Min., Plan A or B, 9 Cr.

Credits to be selected with approval of the professional education adviser.

IV. Electives: Min., Plan A, 3-6 Cr.; Plan B, 9 Cr.

MASTER OF SCIENCE: Mathematics—Junior High School Program

Plan A, 45 Cr.; Plan B, 48 Cr.

I. Research: Min., Plan A, 9-15 Cr.; Plan B, 3-6 Cr.

ED 615 Introduction to Research, 3 Cr.

MATH 699 Thesis, 6-9 Cr. (Plan A only)

II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.

Select course work in the mathematics major. The program is planned by the student and the mathematics adviser. Credits may be earned in mathematics, mathematics education, and computer science. The number of credits in each area to be determined by the needs of the student.

III. Professional Education: Min, Plan A or B, 9 Cr.

Credits to be selected with approval of the professional education adviser.

IV. Electives: Min., Plan A, 3-6 Cr.; Plan B, 9-12 Cr.

MATHEMATICS (MATH) COURSE DESCRIPTIONS

515. Number Theory. Prime and composite integers. Diophantine analysis, number congruences, quadratic residues. Prereq.: 356 or consent of instructor. 3 Cr. W.

525. Contemporary Geometry. Vectors and transformations on the Euclidean plane, and their application to problem solving. Prereq.: high school geometry and 254. 3 Cr. S.

526. Advanced Geometry. Projective geometry from both a synthetic and an analytic point of view. Primitive forms, projectivities, and conics. Prereq.: 424 or 525. 3 Cr. W.

536. Complex Variables. The complex field, the theory of analytic functions, power series. Fundamental Theorem of Algebra. Prereq.: 244. 3 Cr. S.

540. History of Mathematics. Historical survey of the development of mathematics. Prereq.: 241. 3 Cr. S, SUM ALT.

545. Introduction to Real Analysis I. Functions, complete ordered fields, sequences and series of real numbers. No calculus skills are required. Prereq.: 356 or permission of instructor. 3 Cr. F ALT.

546. Introduction to Real Analysis II. Limits, metric spaces, continuous functions, connectedness, completeness, compactness, uniform continuity. Prereq.: 545. 3 Cr. W ALT.

547. Introduction to Real Analysis III. Riemann integral, derivatives, theorems of calculus, sequences and series of functions. Lebesgue integral. Prereq.: 546. 3 Cr. S ALT.

552. Topics in Mathematics for Secondary School Teachers. Number systems, sets, deduction, algebras, geometries, functions, probability, computers. The changing mathematics curriculum. 4 Cr. DEMAND.

555. Foundations of Mathematics. Operations on sets, relations, and functions, cardinal number, ordinal arithmetic, the axiom of choice, axiomatic theories. 3 Cr. SUM ALT.

557. Linear Algebra. Vector spaces, Euclidean n -space, linear transformations, matrices. Prereq.: 242, 356. 3 Cr. F, W, SUM ALT.

559. Recent Trends in Elementary School Mathematics. Modern approach to teaching arithmetic, teaching aids and devices, experimental work, recent research. 4 Cr. DEMAND.

560. Topology. Metric spaces, topological spaces, separation axioms, connectedness, compactness. Prereq.: 356. 3 Cr. W ALT, SUM ALT.

570. Numerical Analysis. Difference tables and applications, interpolation, numerical integration and differentiation, error analysis, numerical solution of equations. Prereq.: 243, and either CSCI 270 or CSCI 274. 3 Cr. W.

MATHEMATICS (MATH) COURSES FOR GRADUATE STUDENTS ONLY

610. Recent Trends in Junior High School Mathematics. Selected topics in junior high school mathematics: materials, approaches, diagnosis and remediation, research, and experimental programs. 3 Cr. SUM.

611. Teaching Mathematics in the Secondary School. Survey of mathematics curricular development, objectives and content of proposals for change in the mathematics curriculum, learning theory, issues and trends. 3 Cr. F ALT, SUM ALT.

616. Teaching Geometry in the Secondary School. Historical development, current issues and trends, curricular reform movements, experimental programs, research findings. 3 Cr. W ALT, SUM ALT.

619. Teaching Algebra in the Secondary School. Topics related to the teaching of algebra and related areas. Historical aspects, methodology, curricular developments; evaluation and research findings in algebra. 3 Cr. S ALT, SUM ALT.

624. Modern Geometry I. An overview of Euclidean and non-Euclidean geometries, and the fundamentals of synthetic projective geometry. Prereq.: one course in college level geometry. 3 Cr. F ALT, SUM ALT.

625. Modern Geometry II. Oriented toward transformational geometry. Topics for study include: Klein's Erlanger program and an analytic model of the real projective plane. Prereq.: 624 and a background in vector spaces, matrices. 3 Cr. W ALT, SUM ALT.

630. Modeling and Simulation I. A study of the construction of models which simulate real systems. Prereq.: 443, STAT 537. 3 Cr. DEMAND.

631. Modeling and Simulation II. Advanced study of models which simulate real systems. Prereq.: 630. 3 Cr. DEMAND.

- 636. Complex Analysis I.** The complex field, topology of the complex plane, analytic functions. 3 Cr. SUM ALT.
- 637. Complex Analysis II.** Complex integration theory. Prereq.: 636. 3 Cr. SUM ALT.
- 638. Complex Analysis III.** Complex series expansions, conformal mappings, Dirichlet's problem. Prereq.: 637. 3 Cr. DEMAND.
- 640. Numerical Mathematics: Analysis.** Norms and inner product spaces, polynomial and rational approximation theory, numerical solutions of ordinary and partial differential equations. Prereq.: 470. 3 Cr. W.
- 641. Numerical Math: Linear Algebra.** Gaussian elimination and other methods for linear systems of equations, error and stability analysis, eigenvalue and eigenvector methods, solution of nonlinear systems. Prereq.: 640. 3 Cr. S.
- 643. Calculus for Secondary Teachers.** Review of calculus involving limits, integration, differentiation of elementary functions. Cannot be used in the M.A. program or part of the 24 quarter hours of mathematics in the M.S. program. 4 Cr. DEMAND.
- 645. Real Analysis I.** The real number system. Lebesgue measure and integration. 3 Cr. DEMAND.
- 646. Real Analysis II.** Differentiation, abstract spaces. Prereq.: 645. 3 Cr. DEMAND.
- 647. Real Analysis III.** Generalized measure and integration. Prereq.: 646. 3 Cr. DEMAND.
- 656. Modern Algebraic Theory I.** Group theory, rings and ideals, polynomials. Prereq.: 356. 3 Cr. F ALT, SUM ALT.
- 657. Modern Algebraic Theory II.** Fields, field extensions, Galois theory. Prereq.: 656. 3 Cr. W ALT, SUM ALT.
- 658. Modern Algebraic Theory III.** Selected topics from the theory of modules or homological algebra. Prereq.: 657. 3 Cr. DEMAND.
- 660. Topology I.** Topological spaces, product spaces, net and filters, compactness. Prereq.: 356. 3 Cr. SUM ALT.
- 661. Topology II.** Connectedness, separation axioms, metric spaces, completeness, comparison of topologies, function spaces. Prereq.: 660. 3 Cr. SUM ALT.
- 662. Topology III.** Topics from uniform spaces, topological groups and algebras, algebraic topology. Prereq.: 661. 3 Cr. DEMAND.
- 671. Computer Programming.** Concepts of programming Fortran. Writing a program to solve an approved problem in the major field. Lab. Prereq.: approval of instructor and students' major adviser. 3 Cr. SUM ALT.
- 680. Graduate Seminar.** Reading, research and discussion of selected topics. Prereq.: consent of instructor. 1-3 Cr. DEMAND.
- 699. Thesis.** 3-9 Cr. F, W, S, SUM.

STATISTICS (STAT) COURSE DESCRIPTIONS

- 530. Design and Analysis of Experiments.** Single and multiple analysis of variance and multiple comparisons procedures for fixed, mixed, and random effects designs, including completely randomized design, randomized complete block design, nest designs, and Latin square designs. Prereq.: 229. 3 Cr. W.
- 531. Regression Analysis.** Linear and multiple regression, model building with selection procedures, nonlinear estimation, analysis of covariance. Prereq.: 229. 3 Cr. F.
- 532. Sample Survey Design.** An introduction to sample survey design with an emphasis on practical applications. Topics include questionnaire construction, determining the sample size, simple, stratified, cluster, ratio, regression, and systematic sampling techniques. Prereq.: 229. 3 Cr. W.
- 533. Applied Multivariate Statistical Methods.** Topics include Hotelling's T^2 , MANOVA, principal components analysis, factor analysis, discriminant analysis, and cluster analysis. Prereq.: 431. 3 Cr. F.
- 535. Introduction to Nonparametric Statistics.** One and two sample location problems, the two dispersion problem, the one and two way layouts, the independence problem, and selected problems in regression. Prereq.: 229. 3 Cr. S.
- 537. Probability and Statistics I.** Axiomatic development of probability, continuous and discrete sample spaces, random variables, probability density functions, Bayes' Theorem. Prereq.: 243, 254. 3 Cr. F, SUM ALT.
- 538. Probability and Statistics II.** Distributions of functions of random variables, multi-dimensional random variables, t and f distributions, moment generating functions. Prereq.: 244, 537. 3 Cr. W.
- 539. Probability and Statistics III.** Point estimation and sufficient statistics, maximum likelihood estimation of parameters, statistical hypotheses, statistical tests. Prereq.: 538. 3 Cr. S.
- 543. Introduction to Probability Models.** Probability theory, random variables, Markov Chains, Poisson Process, queueing theory. Prereq.: 243. 3 Cr. DEMAND.



Music (MUS, MUSM, MUSP, MUSE)

238 PERFORMING ARTS CENTER/255-3223

Chairperson: Kenton Frohrip

Graduate Faculty: Echols, Ernest, Flom, Fuller, Givens, Gyllstrom, J. Johnson, Layne, Moore, Schrader, Wilhite

St. Cloud State University is accredited by the National Association of Schools of Music.

MASTER OF SCIENCE

Music Education Emphasis

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution, must have completed at least an undergraduate minor in music, and must meet the admission requirements of the Office of Graduate Studies. When an applicant holds a minor in music, undergraduate course work will be required to bring the student to a major program level. Acceptance into a graduate program is determined by musical knowledge, experience and performance.

At least one-half of the Master of Science degree program must be earned in courses in which enrollment is limited to graduate students.

This program is designed for both full-time and part-time students. Full-time students must expect to complete part of their course load in evening classes.

Plan A, 45 Cr.; Plan B, 48 Cr.

- I. Research: Min., Plan A, 9-12 Cr.; Plan B, 3-6 Cr.
 - MUS 602 Introduction to Research in Music, 3 Cr. and/or
 - MUS 697 Starred Papers, 3 Cr. (Plan B only)
 - MUS 698 Creative Work, 6-9 Cr. (Plan A only)
 - or
 - MUS 699 Thesis, 6-9 Cr. (Plan A only)
 - 3 Cr. electives in research optional (Plan B only)
- II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.
 - Prescribed:
 - MUS 604 Analytical Techniques, 3 Cr.
 - Applied Music (consent of adviser), 3 Cr.
 - MUS 606 Music Literature, 3 Cr.
 - MUS 608 Curriculum Development, 3 Cr.
 - Electives: Min., Plan A, 6 Cr.; Plan B, 12 Cr.
- III. Professional Education: Min., 9 Cr.
 - Credits to be selected with approval of the professional education adviser.
- IV. Electives: Min., Plan A, 3-9 Cr.; Plan B, 9 Cr.

Piano Pedagogy Emphasis

Plan A Only, 46 Cr.

I. Research: Min., 9 Cr.

*MUS 602 Introduction to Research in Music, 3 Cr.

*MUS 698 Creative Work, 6-9 Cr.

or

*MUS 699 Thesis, 6-9 Cr.

II. Major: Min., 31 Cr.

*MUS 604 Analytical Techniques, 3 Cr.

*MUS 606 Music Literature, 3 Cr.

MUS 632 Private Lessons: Piano (3 quarters), 9 Cr.

MUS 652 Chamber Music Performance, 1 Cr.

MUS 680 Graduate Seminar: Research in Piano Pedagogy, 3 Cr.

MUSM 530 Piano Pedagogy, Elementary Level, 3 Cr.

MUSM 531 Piano Pedagogy, Intermediate Level, 3 Cr.

MUSM 532 Piano Pedagogy, Advanced Level, 3 Cr.

MUSM 536 Piano Literature, 3 Cr.

(Students who have completed MUSM 430, MUSM 431, MUSM 432, MUSM 436, or the equivalent should substitute music elective.) Music History, 4-6 Cr. Music Theory, 4-6 Cr. A total of 10 Cr. of music history and music theory.

III. Electives, Min., 3-6 Cr.

*Courses common to core requirements for Master of Science—Music Education.

MUSIC MUSICIANSHIP (MUSM) PERMANENT WORKSHOP DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to page 27 to determine the maximum number of workshop credits which may be applied to graduate degrees.

570. Workshop: Music Instrument Repair. Consideration of instrument care, upkeep, and minor repair. 2 Cr. DEMAND.

574. Workshop: Woodwind Instrument Literature. Explore pedagogical, solo and chamber literature for woodwinds in progressive order of difficulty. Prereq.: MUSM 475 or 575. 2 Cr. DEMAND.

576. Workshop: Choral Development. A workshop designed for choral directors. Emphasis will be placed on development and maintenance of an effective choral program at the senior high level. 2 Cr. DEMAND.

577. International Voice Skills in Choral Conducting and General Music Workshop. This workshop is practical, hands-on, and oriented to solving real problems of choral conducting and classroom teaching. Yet it offers understanding which undergirds the practical. 3 Cr. SUM.

579. Workshop: Teaching Total Percussion. A course designed to explore recent trends in percussion education through a comprehensive integration of all the standard percussion instruments. Snare drum, mallets, tympani, drum set and trap instruments are included since students (elementary through senior high) are called upon to perform on those instruments in bands and orchestra. Ensemble, literature and curriculum are also included. 2 Cr. DEMAND.

580. Workshop: Flute Pedagogy. Intended primarily for public school music teachers whose major performing instrument is not flute. Deals with principles of tone production, the systematic expansion of technique to the complete practical range of the flute, and methods and literature. 2 Cr. DEMAND.

581. Workshop: Oboe and English Horn Pedagogy. Examination of pedagogical and reed adjustment principles and materials for the oboe and English horn which determine performance. Designed for prospective or practicing teachers of music in schools or private studios. 2 Cr. DEMAND.

582. Workshop: Clarinet Pedagogy. Students will participate in "hands on" playing of the clarinet. Students should be able to play the chromatic scale from Low E to G4 and sight read common combinations of rhythms using whole notes through sixteenths. Emphasis will be upon tone production, tonguing styles and refinement and extension of technique. Students will provide their own instrument. 2 Cr. DEMAND.

583. Workshop: Saxophone Pedagogy. Students will participate in "hands on" playing of the saxophone and should be able to play the chromatic scale throughout the practical range and sight read common combinations of rhythms using whole notes through sixteenths, tone production, vibrato, technical refinement and extension and articulation styles will be emphasized together with appropriate literature and materials. 2 Cr. DEMAND.

584. Workshop: Bassoon Pedagogy. Students will participate in "hands on" playing of the

bassoon. Students should be able to play the chromatic scale throughout practical range and sight read common rhythmic combinations using whole notes through sixteenths, reed adjustment, tone production, tonguing styles and appropriate literature will be emphasized. 2 Cr. DEMAND.

585. Workshop: Trumpet Pedagogy. Methods and materials for teaching trumpet. 2 Cr. DEMAND.

586. Workshop: French Horn Pedagogy. Methods and materials for teaching French Horn. 2 Cr. DEMAND.

587. Workshop: Trombone/Baritone Pedagogy. A study of the history, technique, teaching principles, teaching and performance literature and equipment considerations for trombone and baritone horn or euphonium. 2 Cr. DEMAND.

589. Workshop: Music Education in Minnesota. Participation in clinic and workshop sessions at Minnesota Music Educator's Association Mid-Winter Clinic. May be repeated. Max. of 3 Cr. can be used toward a degree program. 1 Cr. W.

MUSIC MUSICIANSHIP (MUSM) COURSE DESCRIPTIONS

504. Electronic Music. The study and utilization of electronic sounds, techniques and procedures in contemporary music. 3 Cr. DEMAND.

508. Score Preparation. Score preparation for secondary music education performance. 3 Cr. DEMAND.

515. Music of the Baroque and Classical Periods. A comprehensive study of the history and literature of the 18th century. 3 Cr. DEMAND.

518. Hymnology. A study of the function of hymns, the historical development of the hymn, and the evaluation of texts and tunes. Prereq.: MUSM 221, 222. 3 Cr. F ALT.

519. Sacred Music Seminar. Current trends in church music and administration of church music programs. 3 Cr. W ALT.

520. Contemporary Music. Trends in European and American music from about 1910 to the present day. Particular emphasis placed on music since 1920. Prereq.: MUSM 222 and 223. 3 Cr. F ALT.

528. Music of the Romantic Period. The history and literature of the 19th century. 4 Cr. DEMAND.

530. Piano Pedagogy: Elementary Level. Basic problems and techniques in teaching piano to the beginner. Survey of materials and procedures. 3 Cr. F ALT.

531. Piano Pedagogy: Intermediate Level. Basic problems and techniques in teaching piano to the intermediate student. Survey of materials and procedures. 3 Cr. W ALT.

532. Piano Pedagogy: Advanced Level. Basic problems and techniques in teaching piano to the advanced student. Survey of materials and procedures. 3 Cr. S ALT.

536. Piano Literature. A historical and stylistic presentation of piano literature suitable for the concert hall, from the Baroque to the present. 3 Cr. S ALT.

537. Organ Literature. Historical survey of music composed for the organ. Prereq.: MUSM 221, 222. 3 Cr. W ALT.

538. Keyboard Accompanying. Insight into the art of piano accompaniment through discussion and actual performance of representative works. Permission of instructor. 2 Cr. S ALT.

541. Major Instrument Pedagogy. Basic pedagogical problems and techniques of the instrument, methods, and materials for teaching. 3 Cr. DEMAND.

542. Voice Pedagogy. Basic problems and techniques in the teaching of voice and chorus. Survey of procedures and materials. 3 Cr. W ALT.

550. Double Reed Construction. The construction of reeds for oboe, bassoon, and English horn, with attention to varying shapes and facings, intonation problems, tone procurement and adjustment of reeds to fit the individual and instrument. 3 Cr. DEMAND.

556. Choral Arranging. Principles and devices in arranging for choral groups of all types, sizes and degrees of development. 3 Cr. DEMAND.

558. Instrumental Arranging. Principles and devices in arranging for instrumental groups of all types, sizes, and degrees of development. 3 Cr. DEMAND.

562. Brass Pedagogy. Basic pedagogical problems and techniques of each brass instrument. Methods and materials for teaching brass instruments. 3 Cr. DEMAND.

564. Stringed Instrument Pedagogy. Special projects; special techniques of bowing, position work, and artistic skills; survey of solo materials. 3 Cr. DEMAND.

566. Woodwind Pedagogy. Basic pedagogical problems and techniques of each woodwind instrument. Methods and materials for teaching woodwinds. 3 Cr. DEMAND.

567. Church Music History. Study of church music throughout history with special emphasis on liturgical music. 3 Cr. F ALT.

568. Jazz Improvisation. A multi-level experience in improvisation in the jazz style for all instruments. Prereq.: Permission of the instructor. May be repeated to max. of 8 Cr. 2 Cr. DEMAND.

569. Jazz Arranging. Application of practical and theoretical harmony to jazz style and scoring for jazz ensembles. Prereq.: MUSM 205. 4 Cr. DEMAND.

571. Seminar: (topical). Selected musicianship topics. May be repeated to a max. of 9 Cr. 1-4 Cr. DEMAND.

MUSIC PERFORMANCE (MUSP) COURSE DESCRIPTIONS

PRIVATE LESSONS AT GRADUATE LEVEL ARE 1 HOUR.

552. Conducting. Analysis, rehearsal, and performance of a major composition with the band, choir, or orchestra. Prereq.: consent of instructor. May be repeated to max. of 8 Cr. 2 Cr. F, W, S.

554. Private Lessons: Secondary Instrument. Prereq.: consent of instructor. May be repeated to max. of 4 Cr. 1 Cr. F, W, S.

MUSIC EDUCATION (MUSE) COURSE DESCRIPTIONS

522. Psychology of Music. Function of musical aspects relative to the development of skills, maturity, and testing. 3 Cr. DEMAND.

524. Music Education Seminar. Research and discussion of latest developments and innovations as well as analysis and suggestions for resolution of individual teaching programs. 3 Cr. DEMAND.

526. School Music Administration. The practical and philosophical principles relative to the administrations of a music program (K-12). 3 Cr. DEMAND.

MUSIC COURSES (MUS) FOR GRADUATE STUDENTS ONLY

602. Introduction to Research in Music Education. Materials, techniques, and procedures for research in music education. 3 Cr. W.

604. Analytical Techniques. Harmonic, melodic, and structural analysis of music in various periods with emphasis on those aspects specifically needed by students. 3 Cr. ALT.

606. Music Literature. Major works of composers ranging from Bach to Schoenberg, with special emphasis given to aesthetics and evaluation. 3 Cr. ALT.

608. Curriculum Development. A philosophical and historical study of the problems of music curricula development with emphasis on current practices. 3 Cr. ALT.

631. Private Lessons: Piano. Prereq.: approval of instructor. May be repeated to max. of 9 Cr. 1 Cr. F, W, S.

632. Private Lessons: Piano. One 1-hour lesson per week and studio class. Study of literature, techniques, and interpretation. Prereq.: permission of instructor. May be repeated for additional credits to a max. of 27 Cr. Only 9 Cr. applicable to degree program. 3 Cr. F, W, S.

633. Private Lessons: Organ. Prereq.: approval of instructor. May be repeated to max. of 9 Cr. 1 Cr. F, W, S.

635. Private Lessons: Voice. Prereq.: approval of instructor. May be repeated to max. of 9 Cr. 1 Cr. F, W, S.

641. Private Lessons: Brass Instruments. Prereq.: approval of instructor. May be repeated to max. of 9 Cr. 1 Cr. F, W, S.

643. Private Lessons: Stringed Instruments. Prereq.: approval of instructor. May be repeated to max. of 9 Cr. 1 Cr. F, W, S.

645. Private Lessons: Woodwind Instruments. Prereq.: approval of instructor. May be repeated to max. of 9 Cr. 1 Cr. F, W, S.

647. Private Lessons: Percussion Instruments. Prereq.: approval of instructor. May be repeated to max. of 9 Cr. 1 Cr. F, W, S.

652. Chamber Music Performance. Study and performance of chamber music. Prereq.: consent of adviser. May be repeated to max. of 2 Cr. 1 Cr. F, W, S.

654. Major Performing Organization. Participation in an assigned sectional rehearsal of the band, choir, or orchestra. Prereq.: consent of instructor. May be repeated to max. of 2 Cr. 1 Cr. F, W, S.

680. Graduate Seminar: Research in Piano Pedagogy. Student research projects at all levels of piano pedagogy. Lectures on tests, periodicals, and other research sources will be included. Prereq.: MUSM 530, 531. 3 Cr. ALT.

697. Starred Papers. Starred papers, research projects in music. Permission of adviser and instructor. 3 Cr. F, W, S, SUM.

698. Creative Work. 6-9 Cr. F, W, S, SUM.

699. Thesis. 6-9 Cr. F, W, S, SUM.

Philosophy (PHIL)

123 BROWN HALL/255-2234

Chairperson: John Dienhart

Graduate Faculty: M. Anderson, Boyer, Corliss, Dienhart, Gill, A. Phillips, White, Yoos

The Department of Philosophy has three main functions: (1) to provide all students with an introduction to the ideas, problems, and methods of philosophers; (2) to give courses serving the particular needs of students who are majoring or minoring in other fields; (3) to offer major and minor programs for those with special interests in one or more areas of philosophy, such as philosophy of science, social philosophy, ethics, philosophy of religion, and logic.

The department does not currently offer a graduate major. Service courses for other graduate programs are offered primarily in the daytime schedule.

COURSE DESCRIPTIONS

510-529. Special Studies. Seminar for intensive study of a particular philosopher (as announced in the class schedule), or of the philosophical problems in a special discipline, such as history or biology or behavioral sciences. 2-4 Cr. DEMAND.

531. Philosophy of Art. A general introduction of philosophical questions relating to the fine arts. 4 Cr. W ALT.

532. Film Aesthetics. An introduction to motion pictures as an art form and a critical examination of various theories of film. Special attention to: Russian Theories of montage, the Auteur theory, and the realist thesis. 4 Cr. DEMAND.

533. Philosophy of History. The nature of historical explanation, historicism, objectivity, and meaning of history. Prereq.: 260 or consent of instructor. 4 Cr. DEMAND.

542. History of American Philosophical Thought. The development of American philosophy from its beginnings: puritanism, transcendentalism, idealism, pragmatism, realism, and contemporary analysis. 4 Cr. W ALT.

Physical Education (PE) and Recreation (REC)

227 HALENBECK HALL/255-2155

Chairperson Carol Brink

Graduate Faculty Brink, Buckley, Collins, Kelly, Kurtz, Morohoshi, Nearing, Waxlax, Whitlock

MASTER OF SCIENCE—Physical Education

Admission to the graduate program in physical education requires completion of an undergraduate minor or equivalent of at least 36 quarter hours in physical education. In some cases, the applicant may be required to complete additional undergraduate work even though a major or minor may have been completed. Applicants must have completed a baccalaureate degree from an accredited college or university. Teaching applicants will complete the program described below. Applicants who do not have a background in teacher education should confer with the department chairperson.

A minimum of 24 credits in physical education must be taken. Some credits in fields related to physical education also will be accepted with consent of adviser.

Under Plan B, candidates are required to write a starred paper in conjunction with a graduate physical education course and shall take a final oral examination over the starred paper. The paper shall be a detailed study and shall follow the style manual of the Graduate School available in the Graduate Studies office. In addition, a final written comprehensive examination is required.

At least one-half of the minimum requirements for the Master of Science degree program in physical education are required to be earned in courses in which enrollment is limited to graduate students.

This program is designed for both full-time and part-time students. Full-time students can be expected to complete part of their course load in evening classes. The part-time student may complete the program through regular evening instruction and/or through summer quarter attendance.

Plan A, 45 Cr.; Plan B, 48 Cr.

- I. Research: Min., Plan A, 9 Cr.; Plan B, 3 Cr.
PE 601 Research Methods in Physical Education, 3 Cr.
PE 699 Thesis, 6-9 Cr. (Plan A only)
- II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.
Selected course work in physical education. Consent of adviser.
- III. Professional Education: Min., Plan A or B, 9 Cr.
Consent of secondary education adviser.
- IV. General Electives: Min., Plan A, 3-6 Cr.; Plan B, 12 Cr.
Prescribed: PSY 678, Introduction to Graduate Statistics, 3 Cr. Electives from related fields,
General Studies Core or courses in the major. Consent of adviser.

PHYSICAL EDUCATION (PE) PERMANENT WORKSHOP DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to page 27 to determine the maximum number of workshop credits which may be applied to graduate degrees.

522. Workshop: Appropriate Games and Activities for Teaching Basic Skills. Workshop for elementary/physical education teachers. The theme is "Games with a purpose." 1 Cr. W.

523. Workshop in Track and Field. A workshop using a learn-by-doing approach to track and field activities. Special emphasis will be placed on biomechanical analysis of events as well as coaching and officials certification. 2 Cr. SUM.

PHYSICAL EDUCATION COURSE DESCRIPTIONS

508. Philosophy of Sport. Objectives/values of sport in a contemporary society. Personal philosophy of sport. 3 Cr. F, S, SUM.

511. Organization and Development of Physical Education in the Elementary School. Principles, problems, and procedures. Open to 4-year elementary graduates. 3 Cr. F, W.

512. History and Principles of Physical Education. Concepts and philosophy underlying physical education. Role of physical education in life of ancient societies to present. 3 Cr. F, W.

515. Organization and Administration of Intramural Sports. Methods and materials of intramural sports program in public schools. Content of program. Methods of organizing competition, regulations governing play, outcomes, and awards. 3 Cr. S.

523. Basic Electrocardiography. A study and measurement of the electrical activity associated with cardiac function. Prereq.: PE 349 or permission of instructor. 3 Cr. S.

530. Seminar: Topical. Selected topics in physical education. May be repeated to max. of 9 Cr. 1-4 Cr. DEMAND.

535. Theory of Dance. History, theory, and philosophy underlying dance from primitive times to the present. Prereq.: permission of instructor. 3 Cr. DEMAND.

551. Physical Education Prospectives. Overview of the concepts of developmental/adapted physical education in the school settings. Emphasis will be placed upon PL 94-142 and Section 504 of the Rehabilitation Act, least restrictive environment, mainstreaming techniques, and those disabling conditions most prevalent in regular physical education classes. 3 Cr. F, W.

553. Organization and Administration of Secondary Level Physical Education. Methods of presentation and adaptation of materials on secondary level for instructional intramural, and special events programs. 3 Cr. F, S.

556. Administration of Interscholastic Athletics. History and objectives, national, state and local control, and contemporary challenges in interscholastic athletic programs. 3 Cr. F, W, S, SUM.

560. Motor Development. A study of normal and abnormal motor development and its principles emphasizing mature and immature locomotor and nonlocomotor patterns. 3 Cr. ALT.

561. Appraisal and Assessment of Motor Performance. Techniques and procedures for appraising and assessing motor performances. Emphasis will be placed upon the most valid and reliable evaluative tools utilized in assessing exceptional populations and on the Individualized Educational Program (IEP) preparation. 3 Cr. ALT.

562. Movement Opportunities and Teaching Techniques for Exceptional Populations. Curricula programming, teaching techniques, and adaptations and/or modifications designed specifically to meet the unique physical needs of mentally handicapped individuals and emotionally disturbed individuals. 3 Cr. ALT.

563. Movement Opportunities and Teaching Techniques for Exceptional Populations II. Curricula programming, teaching techniques, and adaptations and/or modifications designed specifically to meet the unique needs of physically handicapped individuals and other health impaired individuals. 3 Cr. ALT.

564. Developmental/Adapted Physical Education Practicum I. Application of theoretical knowledges through hands-on experiences with exceptional students—mentally retarded, emotionally disturbed, learning disabled, physically handicapped, visually handicapped, hearing impaired, and/or other special needs students—both in regular and self-contained physical

education settings. 2 Cr. F, W, S, SUM.

565. Developmental/Adapted Physical Education Practicum II. Application of theoretical knowledges through hands-on experiences with exceptional students—mentally retarded, emotionally disturbed, learning disabled, physically handicapped, visually handicapped, hearing impaired, and/or other special needs students—both in regular and self-contained physical education settings. 2 Cr. F, W, S, SUM.

566. Developmental/Adapted Physical Education Practicum III. Advanced coverage of the information and techniques from 565. 2 Cr. F, W, S, SUM.

568. Sport Opportunities for Exceptional Populations. Sport opportunities available for exceptional populations including recreational sports and established sport organizations and/or associations and their classification of participants and rules and regulations governing their activities. 3 Cr. S.

591. Psychology of Sport. Examining sport in terms of motivation, performance, and the relationship between sport and human development. 3 Cr. W.

PHYSICAL EDUCATION COURSES FOR GRADUATE STUDENTS ONLY

601. Research Methods in Health and Physical Education. Selection of research topics, searching literature, test construction, descriptive methods, laboratory research, application of statistical procedures, formal writing, experimental design. 3 Cr. DEMAND.

607. Principles of Movement. Scientific principles that form the basis for developing a complete concept and understanding of human movements. 3 Cr. DEMAND.

609. Sport and Society. The inter-relationship of sports and athletics with other aspects of culture. Emphasis on the twentieth century. Prereq.: 412-512 or consent of instructor. 3 Cr. DEMAND.

610. Comparative Physical Education. Physical education in other parts of the world with emphasis on methods of instruction, objectives and types of activities. Selected countries will be studied in depth. 3 Cr. DEMAND.

615. Human Movement: A Neurological Approach. The neurological foundations of movement and abnormal movement patterns as a result of trauma and disease upon the nervous system. 3 Cr. SUM.

620. Seminar in Physiology of Exercise. A discussion and evaluation of current research and conditioning trends in exercise physiology. Prereq.: 349 or 449. 3 Cr. DEMAND.

621. Laboratory Techniques in Exercise Physiology. The study of advanced exercise physiology laboratory techniques for students who plan to continue studies in the exercise physiology area. Prereq.: 449 or 620, Cardiopulmonary resuscitation certification. 4 Cr. DEMAND.

622. Exercise and Fitness Prescription. Application of the information obtained in Laboratory Techniques (PE 621). Students will learn how to prescribe programs that will promote "wellness" and lead to healthier lifestyles. Prereq.: 449 and/or 620 and 621. 3 Cr. DEMAND.

624. Internship in Exercise Physiology and Cardiac Rehabilitation. Course is designed to give the student a Phase I and Phase II Hospital or Clinic Cardiac Rehabilitation experience. Prereq.: PE 620, 621 and 622. 3-12 Cr. DEMAND.

631. Seminar in Physical Education. Problems of teachers engaged in teaching or supervising physical education in the public schools. 3 Cr. DEMAND.

633. Readings and Research in Physical Education. 1-4 Cr. DEMAND.

652. Test and Measurements in Physical Education. Critical study of tests and measurements available in physical education; methods of constructing and evaluating new tests and measurements. 3 Cr. SUM.

654. Advanced Theory of Competitive Athletics. Practical problems associated with coaching and training a competitive athlete through high school and college years. No one sport will be stressed. 3 Cr. SUM.

660. Administration of Physical Education. Facilities, equipment, space, time, costs, etc. involved in promotion of a physical education program. 3 Cr. DEMAND.

661. Planning Physical Education Facilities. Principles, terminology, and standards for planning construction, use, and maintenance of facilities. 3 Cr. DEMAND.

699. Thesis. 6-9 Cr. F, W, S, SUM.

RECREATION COURSE DESCRIPTIONS

515. Organization and Administration of Recreational Activities. Methods and materials of the recreational sports program in public schools. Content of program and methods of organizing competition. 3 Cr. DEMAND.

541. Outdoor Education. Development in outdoor education; instructional principles of outing activities and outdoor education program materials and methods. 3 Cr. DEMAND.

Physics (PHYS), Astronomy (ASTR), and Engineering Science (ENGR) 324 MATHEMATICS AND SCIENCE CENTER/255-2011

Chairperson: Charles Eckroth

Graduate Faculty: Dalton, Eckroth, Ellis, Garrity, Lesikar, McWilliams, W. Pou, Trummel, Weitenbeck

The department does not currently offer a graduate program. Service courses for other graduate programs are offered primarily in the daytime schedule, although some classes may be offered in summer quarter.

PHYSICS (PHYS) COURSE DESCRIPTIONS

520. Seminar. Lectures, readings, discussion on selected topics. May be repeated. 1-4 Cr. DEMAND.

540. Biophysics-Instrumentation and Material Properties. Mechanical electrical and optical properties of biological material. Prereq.: 213, CHEM 211, 212; concurrent enrollment in BIOL 303. 3 Cr. ALT.

541. Biophysics-Neurophysics and Bioelectricity. Electroneurophysiology, signal analysis, sensory and motor transduction. Prereq.: 213, CHEM 211, 212; concurrent enrollment in BIOL 303. 3 Cr. ALT.

546. Methods of Theoretical Physics. Lagrangian and Hamiltonian mechanics, tensor, and vector calculus methods applied to classical mechanics and electrodynamics. Prereq.: 236, MATH 334. 4 Cr. DEMAND.

556. Methods for Teaching Science. Modern approaches to teaching science in junior or senior high school. Lab. 2 Cr. W.

559. Methods and Materials for Teaching Physics. Modern approaches to teaching of high school physics in classroom and laboratory, including materials of Physical Science Study Committee. Lab. 2 Cr. W.

ASTRONOMY (ASTR) COURSE DESCRIPTION

This course is not intended to support a graduate degree program but is intended to respond to identified needs of post-baccalaureate students. Please refer to page 27 to determine the maximum number of workshop credits which may be applied to graduate degrees.

585. Observational Astronomy Workshop. Stars, constellations, planets and their motions, meteors, comets, galaxies will be observed using the Mathematics and Science Center Planetarium and Observatory. 1 Cr. SUM.

ASTRONOMY (ASTR) COURSE DESCRIPTIONS

505. Introduction to Planetarium Operation. Use of the planetarium projector to illustrate important sky motions, appearance of the sky from different places on the Earth, seasonal passage, and bright constellations. Student will normally demonstrate competence by giving a show. Prereq.: 311 or equivalent or consent. 1 Cr. DEMAND.

521. Seminar. Lectures, readings and/or discussions on selected topics in astronomy, astrophysics or planetary science. May be repeated. 1-4 Cr. DEMAND.

Political Science (POL) 315 BROWN HALL/255-2162

Chairperson: Janna Merrick

Graduate Faculty: R. Becker, Eastby, Frank, E. Jones, Kilkelly, Merrick, O. Schmidt, Williamson

Students interested in the area of Political Science must refer to the requirements of Social Science.

The graduate courses offered by the department provide one component of the Social Science major and provide service courses to other programs. Courses may be offered in either the daytime or evening schedule.

COURSE DESCRIPTIONS

511. The Presidency. White House Staff, relations with the heads of departments, legislative leadership, defense responsibilities, foreign relations, party activities. Prereq.: 111. 4 Cr. DEMAND.

512. Legislative Process. Problems faced by democratic legislatures such as the influence of committees, political party influence, pressure groups. Prereq.: 111. 4 Cr. DEMAND.

513. Judicial Process. An examination of the structure, process and personnel of American courts with particular emphasis on the role of the United States Supreme Court in the American political system. Prereq.: 111. 4 Cr. F, S.

529. Seminar. Discussion, readings, and research under faculty guidance and supervision. Specific topic selected each time offered. Prereq.: permission of instructor. 4 Cr. May be repeated to max. of 9 Cr. F, S.

551. International Law. Survey of development and contemporary application of rules and principles of international law: maritime laws, ocean resources, space, and peaceful settlement of disputes between states. Prereq.: 251. 4 Cr. DEMAND.

552. United Nations and Regional Organization. Organization, authority, achievements and problems of the United Nations and of its auxiliary components. Prereq.: 251. 4 Cr. DEMAND.

563. American Political Thought. Study of the philosophy and theories which underlie the American system of democratic government and which have contributed to the formation of this system of government. Prereq.: 111. 4 Cr. W.

565. Modern Ideologies. A study of the ideologies of Facism, Communism, and ideas which have contributed to democratic thought. 4 Cr. S.

570. U.S. Public Opinion. The nature of and major influences upon public attitudes, the measurement of public opinion, and its role in government. Prereq.: 111 or permission of instructor. 4 Cr. DEMAND.

571. Political Parties and Elections. The structure and activities of American political parties and their impact on individual and group political behavior. Prereq.: 111. 4 Cr. DEMAND.

581. Administering Public Policy. Studies of initiation, content, administration, and impact of selected contemporary domestic government policies: transportation, consumerism, environment, poverty. Prereq.: 111. 4 Cr. DEMAND.

582. Public Personnel Administration. Personnel methods in the public sector including recruitment, employee performance, employee rights, collective bargaining, affirmative action and employee conduct. Prereq.: 111. 4 Cr. DEMAND.

583. Managing Local Governments. Practical problems of local administration including grant applications, personnel, budgeting, public works, and local renewal. Prereq.: 282 or 313 or consent of instructor. 4 Cr. DEMAND.

584. Public Budgeting. Studies budgeting in public agencies and emphasis on budget preparation and the politics of budget decisions. Stresses practical applications of budget making. Prereq.: 380; ECON 460 or 461. 4 Cr. DEMAND.

585. Administrative Law. Legal problems arising out of use of administrative agencies; administrative procedure; judicial relief against administrative action. Prereq.: 111. 4 Cr. W.

591. Constitutional Law. A study of Supreme Court decisions which interpret the federal system; powers of the legislative, executive, and judicial branches; the commerce clause; federal taxation powers. Prereq.: 111. 4 Cr. F. DEMAND.

592. The Courts and Civil Rights. Supreme Court decisions concerning discrimination, speech, religion, search and seizure, counsel and other individual rights. Prereq.: 111. 4 Cr. F, S.

COURSES FOR GRADUATE STUDENTS ONLY

619. American Government Seminar. Research under faculty guidance and supervision. A specific topic selected each time offered. Prereq.: consent of instructor. May be repeated to max. of 9 Cr. 1-4 Cr. DEMAND.

639. Comparative Government Seminar. Research under faculty guidance and supervision. A specific topic selected each time offered. Prereq.: consent of instructor. May be repeated to max. of 9 Cr. 1-4 Cr. DEMAND.

659. International Relations and Organization Seminar. Research under faculty guidance and supervision. A specific topic selected each time offered. Prereq.: consent of instructor. May be repeated to max. of 9 Cr. 1-4 Cr. DEMAND.

PSYCHOLOGY (PSY)

A216 EDUCATION BUILDING/255-4157

Chairperson: Marilyn Jensen

Coordinator—Counseling Psychology: John Hotz

Graduate Faculty: D. Anderson, Buhl, Dwyer, Gasparotto, Hemmer, Hotz, Jazwinski, M. Jensen, Kukuk, Lamwers, Lesar, Marcattilio, Mason, Murphy, Nunes, T. Peterson, Petrangelo, Preble, Prochnow, Redding, Renn, Rudrud

MASTER OF SCIENCE—Psychology: Behavior Analysis

This program is designed for those students who desire advanced academic and professional training in Behavior Analysis. Students may specialize in any of the following areas: developmental disabilities, behavior therapy, organizational behavior management, chemical dependency, behavioral medicine, or the experimental analysis of behavior. Students are thus prepared for employment in a variety of agencies, private practice and consulting (these require State licensure) or doctoral training.

This program is designed for both full and part-time students though all students must complete a one quarter full-time internship and one quarter residency on campus in preparation of the masters thesis.

PROGRAM INQUIRIES

For program information, write Chairperson, Department of Psychology, St. Cloud State University, St. Cloud, MN 56301. Telephone: (612) 255-4157.

APPLICATION DEADLINES

Entry to this program is limited to the fall quarter. The decision dates regarding acceptance are April 1 and June 1. Applications should be submitted by one of these dates. Completed applications consist of the application form for admission to graduate studies, the application form for admission to this program, three completed recommendation forms, scores on the general aptitude area of the Graduate Record Examination, and official transcripts of all undergraduate and graduate work.

Plan A only, 70 Cr.

I. Research: Min., 18 Cr.

Prescribed:

PSY 641 Single Case-Design, 3 Cr.

PSY 642 Research Planning and Reporting, 3 Cr.

PSY 678 Introduction to Graduate Statistics, 3 Cr.

PSY 699 Thesis, 9 Cr.

II. Major: Min., 34 Cr.

A. Prescribed Behavior Analysis Core: Min., 18 Cr.

PSY 533 Applied Behavior Analysis I, 3 Cr.

PSY 534 Applied Behavior Analysis II, 3 Cr.

PSY 569 Individual Appraisal, 3 Cr.

PSY 573 Psychology of Mental Retardation, 3 Cr.

PSY 589 Psychology of Learning, 3 Cr.

PSY 645 Program Support Skills, 3 Cr.

B. Prescribed Pre-Internship Core: Min., 7 Cr.

PSY 519 Professional and Scientific Ethics in Psychology, 3 Cr.

PSY 643 Social Skill Development: A Behavioral Approach, 2 Cr.

PSY 644 Academic Skill Training: A Behavioral Approach, 2 Cr.

C. Prescribed Internship: Min., 9 Cr.

PSY 696 Supervised Internship in Behavior Analysis, 9 Cr.

III. Electives: Min., 18 Cr.

After consulting with the adviser, the student selects electives from other graduate courses which supplement her/his specific program in behavior analysis.

Specific program requirements and course sequences are provided in the Handbook for Students which is available from the Department of Psychology.

MASTER OF SCIENCE—Counseling Psychology

The program in counseling is designed to permit the student to select from among three emphases: community, rehabilitation, and secondary school counseling. It is also possible to receive a certificate for chemical dependency counseling on the graduate level. The required courses for this certificate may be electives within a counseling emphasis or added courses to the program.

PROGRAM INQUIRIES

For program information, write Coordinator, Counseling Psychology, Education Building, A-253, St. Cloud State University, St. Cloud, MN 56301. (612) 255-3131

APPLICATION DEADLINES

Completed applications for admission to graduate studies, including the receipt of all letters of recommendation, and steps 1 through 3 leading to the interview process, listed under "Procedures for Admission to Graduate Programs in Counseling" must be completed by both you and your recommenders by:

- April 15 for spring interview
- June 15 for summer interview

NOTE:

1. Full time entry to the program is limited to the fall quarter only.
2. It is the sole responsibility of the applicant to insure that all materials, including all letters of recommendation required by the Graduate Studies office are received on time. Applicants with incomplete materials will not be interviewed/admitted to the program.
3. The applicants must be admitted to graduate studies prior to the completion of nine (9) St. Cloud State University graduate credits. Any credits taken beyond these nine credits, before admission to graduate studies, will not be counted toward a counseling degree. Transfer credits from other institutions are not affected by this regulation.

PROCEDURE FOR ADMISSION TO GRADUATE PROGRAMS IN COUNSELING

To be considered the applicant must complete the admission procedures as outlined under Admission to Graduate Study.

In addition, the student must complete the following requirements: (Contact the counseling psychology secretary for procedure.)

1. Provide evidence of undergraduate scholarship. A minimum 2.75 grade point average over the last two years of undergraduate education or 480 on the verbal section or 1000 overall on the Graduate Record Examination. Applicants who do not meet the standard admission requirements may be permitted to demonstrate their scholarship and qualify for acceptance by completing a limited program of graduate course work backed by evidence of successful experience in a human service field. Further information pertaining to this alternative may be obtained from the graduate dean.
2. Complete a preliminary writing skills examination.
3. Complete a personal data form.
4. Successfully complete a personal interview with representatives of the profession, advanced students in the program and the counseling faculty. Careful attention will be given to previous work experience, academic background, scholarship, emotional maturity, interpersonal skills and commitment to the counseling profession. Admission is competitive and selection is based on an evaluation of all factors. Interviews are given in early May and early July. For the specific dates, and an appointment, contact the counseling psychology secretary. If attendance at an interview is totally impractical, the program coordinator may designate an alternate method.
5. If admitted, each student must send, within 15 days, one black and white passport type photograph to the coordinator of counseling psychology for identification purposes.

OTHER PROGRAM REQUIREMENTS AND INFORMATION

Part-Time Students

Following admission to graduate studies, all part-time students must complete a minimum of 12 graduate quarter hours per year of course work, approved by their adviser, in order to be admitted to or maintain candidacy in the counseling program. Students must complete the pre-practicum core courses early in the program of studies.

It is department policy to assist part-time students to complete a counseling program while continuing concurrent employment if adviser contact is maintained.

Required Orientation Program

All new students (both part-time and full-time) must attend the fall orientation meeting held in late September or early October. (See the counseling psychology secretary for details.)

Financial Aid

Limited aid may be available through the department in the form of graduate assistantships or federal rehabilitation traineeships. Graduate assistantships require full-time student status and include some work responsibilities for a stipend. Federal rehabilitation traineeships provide both tuition and a stipend. Although these awards do not require work responsibilities, they do demand full-time study and subsequent commitment to employment in the rehabilitation field.

Advisement

Each new student will be assigned an adviser, shortly after the interview process. The student should make contact with the assigned adviser as soon as possible to plan a program of study. Not all advisers are immediately available for conferences, particularly if the student is admitted during the summer session. In these cases, any counseling psychology adviser will be happy to assist you.

Double Major

A student may wish to complete a double major to facilitate greater employability. The "second major" must be completed with a minimum of 15 new credits which are not included or required in the first major or program.

The Pre-Practicum Core Courses

All counseling emphases include a common core of course work prerequisite to the supervised counseling practicum experience.

PSY 651 Counseling Theories, 3 Cr.

PSY 665 Appraisal Techniques, 3 Cr.

PSY 667 Career Development, 3 Cr.

PSY 668 Counseling Procedures, 3 Cr.

A minimum grade of B is required in each of the above.

Supervised Counseling Practicum

This experience directly follows the pre-practicum core courses and will provide for the application of theories and techniques to counseling experience. Each part-time student must apply in writing to the coordinator of counseling psychology for placement in a counseling practicum a minimum of 7 months before beginning practicum. Late applicants might not be admitted. This may result in delayed internship and graduation.

Candidacy

Admission to graduate studies does not constitute candidacy for a counseling degree. Rather, a student who has been admitted to graduate study is advanced to degree candidacy upon the recommendation of the counseling psychology committee. Advancement to degree candidacy requires that the candidate must have completed between 12 and 24 quarter hours of graduate study at St. Cloud State University with a minimum grade point average of 3.0; have submitted to the coordinator of counseling programs a current transcript and three (3) completed, typed program forms signed by the student and the adviser; have clearly demonstrated the aptitude and ability to pursue graduate work, exhibited a commitment to counseling as a profession; and demonstrated potential for a successful career in the field of study selected. Admission to degree candidacy is not an automatic process, but rather the advancement to candidacy is approved by the faculty only after careful evaluation of all pertinent factors.

Supervised Counseling Internship

This experience follows the counseling practicum and will provide clinical agency experience in a work setting. Community and rehabilitation counseling students must complete a 600-hour internship; school counseling students must complete a 400-hour internship. The candidate must apply in writing to the internship coordinator by completing an internship placement request form before February 15—for all placements during the following academic year. This means a minimum of 7 months before beginning internship. (See the counseling psychology secretary for details.)

Final Comprehensive Evaluation (Plans A and B)

The student will be required to complete a final written comprehensive examination regardless of which plan the student chooses to follow. Students with a double major will complete the common portions of the examination as well as both sections relating to the two separate majors.

To be eligible for evaluation, the candidate must complete the procedures outlined earlier in this bulletin under Graduate Study—Final Evaluation Procedures during the final quarter of study. Deadline for application to take the comprehensive examination for each quarter will be the second Friday of that quarter. Examinations will be given on the nearest Friday to midpoint of the quarter. (The midpoint is indicated in the University Calendar as the date the second half of the quarter begins.)

The Curriculum

The following programs reflect the curriculum available at the time the bulletin was printed, but does not necessarily represent the requirements at the time an applicant applies for a program. It should be noted that some additions, deletions, or changes may have been approved through the curriculum process after the printing of this bulletin and it is the responsibility of applicants to check on changes which might affect their program.

COUNSELING—Community Counseling Emphasis

The purpose is to educate individuals to work in a Human Service Agency as a counselor and/or consultant who will emphasize prevention, short term counseling and wellness enhancement activities as a direct service provider to both individuals and agencies. While some may choose to work in a more traditional mental health orientation, it is expected that they might also need additional training beyond the Master's degree. This program provides a common basis of training for all Community Counseling students and some opportunity to specialize in the areas that faculty members have some expertise.

As courses currently are scheduled, this program may be completed in six quarters of full-time study by starting classes during fall quarter. *Coursework includes both day and evening classes.* In addition, the number of credits outlined below represents minimum requirements. The counseling psychology faculty may require additional quarter hours to overcome deficits.

Plan A, 69 Cr.; Plan B, 69 Cr.

- I. Research: Min., Plan A or B, 9 Cr.
 - Plan A: Prescribed
 - PSY 678 Introduction to Graduate Statistics, 3 Cr.
 - PSY 699 Thesis, 6-9 Cr.
 - Plan B: Prescribed
 - PSY 677 Seminar in Counseling, 3 Cr.
 - PSY 678 Introduction to Graduate Statistics, 3 Cr.
 - PSY 679 Research Planning, 3 Cr.
- II. Major: Min., Plan A or B, 48 Cr.
 - A. Prescribed Pre-Practicum Core: Min., 12 Cr.
 - PSY 651 Counseling Theories, 3 Cr.
 - PSY 665 Appraisal Techniques, 3 Cr.
 - PSY 667 Career Development, 3 Cr.
 - PSY 668 Counseling Procedures, 3 Cr.
 - B. Prescribed Community Counseling Emphasis: Min., 24 Cr.
 - PSY 519 Professional and Scientific Ethics in Psychology, 3 Cr.
 - PSY 666 Small Group Counseling Process, 3 Cr.
 - PSY 669 Supervised Counseling Practicum: Community, 6 Cr.
 - PSY 671 Introduction to Marriage and Family Counseling, 3 Cr.
 - PSY 673 Advanced Counseling Procedures, 3 Cr.
 - PSY 674 Consultation, 3 Cr.
 - PSY 698 Practice in Small Group Process, 3 Cr.
 - C. Prescribed Internship: Min., 12 Cr.
 - PSY 696 Supervised Internship in Counseling: Community, 12 Cr.
- III. Electives: Min., Plan A, 15 Cr.; Plan B, 12 Cr.

The student must choose from the following electives.

 - PSY 525 Psychology of Human Sexuality, 3 Cr.
 - PSY 527 Sexual Attitude Reassessment Seminar, 3 Cr.
 - PSY 528 Psychodynamics of the Family, 3 Cr.
 - PSY 565 Stress Management, 3 Cr.
 - PSY 647 Introduction to Community Counseling, 3 Cr.
 - PSY 672 Family Counseling Theory and Techniques, 3 Cr.

PSY 676 Developmental Preventative Procedures, 3 Cr.
Other courses may be substituted with consent of the adviser.

Students with full-time experience in a community counseling setting may substitute some courses with consent of adviser. Departmental approval will be given only for those courses in which the experienced student demonstrates the competencies encompassed in the courses for which substitution is requested.

COUNSELING—Rehabilitation Counseling Emphasis

This program may not be completed in less than six quarters. In addition, the number of credits outlined below represents minimum requirements. The rehabilitation faculty may require additional quarter hours to overcome deficits.

Plan A or B, 72 Cr.

I. Research: Min., Plan A or B, 9 Cr.

Plan A: Prescribed

PSY 678 Introduction to Graduate Statistics, 3 Cr.

PSY 699 Thesis, 6-9 Cr.

Plan B: Prescribed

PSY 677 Seminar in Counseling, 3 Cr.

PSY 678 Introduction to Graduate Statistics, 3 Cr.

PSY 679 Research Planning, 3 Cr.

II. Major: Min., Plan A or B, 54 Cr.

A. Prescribed Pre-Practicum Core: Min., 12 Cr.

PSY 651 Counseling Theories, 3 Cr.

PSY 665 Appraisal Techniques, 3 Cr.

PSY 667 Career Development, 3 Cr.

PSY 668 Counseling Procedures, 3 Cr.

B. Prescribed Rehabilitation Counseling Emphasis: Min., 30 Cr.

PSY 519 Professional and Scientific Ethics in Psychology, 3 Cr.

PSY 529 Vocational Evaluation, 3 Cr.

PSY 650 Introduction to Rehabilitation, 3 Cr.

PSY 652 Seminar: Medical Factors in Rehabilitation, 3 Cr.

PSY 653 Psychological and Sociological Aspects of Disability, 3 Cr.

PSY 655 Seminar in Rehabilitation Counseling, 3 Cr.

PSY 656 Vocational Placement Techniques, 3 Cr.

PSY 658 Rehabilitation Planning and Case Management, 3 Cr.

PSY 669 Supervised Counseling Practicum: Rehabilitation, 6 Cr.

C. Prescribed Internship: Min., 12 Cr.

PSY 696 Supervised Internship in Counseling: Rehabilitation, 12 Cr.

III. Electives: Min., Plan A or B, 9 Cr.

The student must select electives, with consent of adviser, on the basis of his/her specific area of professional planning in rehabilitation counseling.

Students with three or more years of full-time experience in vocational rehabilitation settings may substitute some courses with consent of their adviser. Recommendations by the Rehabilitation Counseling Psychology faculty will be given only for those courses in which the experienced student demonstrates the competencies encompassed in the courses for which substitution is requested.

COUNSELING—Secondary School Counseling Emphasis

To enroll in the secondary school counseling program, a student must hold or be eligible for a teacher's license.

For institutional endorsement for a secondary school counseling license in Minnesota, the following are required:

1. Minnesota teaching license.
2. One year of successful teaching experience.
3. Completion of Master's degree in School Counseling in an approved program.
4. Two thousand hours of accumulated work experience outside field of education.
5. Completion of Psychology 362 and 463 or equivalent.
6. Completion of Education 447 or equivalent.
7. Completion of Health 405 or equivalent.

As courses currently are scheduled, this program can be completed in five quarters of full-time study by starting classes during fall quarter. Course work includes both day and evening classes. In addition, the number of credits outlined below represents minimum requirements. The counseling psychology faculty may require additional quarter hours to overcome deficits. The following program meets the requirements of the Minnesota State Department of Education for licensure as a secondary school counselor.

Plan A or B, 60 Cr.

I. Research: Min., Plan A or B, 9 Cr.

Plan A: Prescribed

PSY 678 Introduction to Graduate Statistics, 3 Cr.

PSY 699 Thesis, 6-9 Cr.

Plan B: Prescribed

PSY 677 Seminar in Counseling, 3 Cr.

PSY 678 Introduction to Graduate Statistics, 3 Cr.

PSY 679 Seminar: Research Planning, 3 Cr.

II. Major: Min., Plan A or B, 50 Cr.

A. Prescribed Pre-Practicum Core: Min., 12 Cr.

PSY 651 Counseling Theories, 3 Cr.

PSY 665 Appraisal Techniques, 3 Cr.

PSY 667 Career Development, 3 Cr.

PSY 668 Counseling Procedures, 3 Cr.

B. Prescribed Secondary School Counseling Emphasis: Min., 30 Cr.

PSY 519 Professional and Scientific Ethics in Psychology, 3 Cr.

PSY 521 Organization and Administration of Guidance Services, 3 Cr.

PSY 592 Guidance for the Handicapped, 3 Cr.

PSY 666 Small Group Counseling Process, 3 Cr.

PSY 669 Supervised Counseling Practicum (Lab.), 6 Cr.

PSY 670 Developmental Psychology, 3 Cr.

PSY 671 Introduction to Marriage and Family Counseling, 3 Cr.

PSY 674 Consultation, 3 Cr.

PSY 676 Developmental/Preventative Procedures, 3 Cr.

C. Prescribed Internship: Min., 8 Cr.

PSY 696 Supervised Internship in Counseling, 8 Cr.

III. Electives: Min., Plan A or B, 1 Cr.

The student must select electives, with consent of adviser, on the basis of his/her specific area of professional planning in secondary school counseling.

Students with full time experience in a school counseling setting may substitute some courses with consent of adviser. Departmental approval will be given only for those courses in which the experienced student demonstrates the competencies encompassed in the courses for which substitution is requested.

For Licensure Only: Individuals already possessing a master's degree may qualify for licensure-only status. Please consult the Coordinator of Counseling Psychology for further information.

GRADUATE-LEVEL CHEMICAL DEPENDENCY CERTIFICATE

The certificate program provides academic and experiential training to prepare persons in the Masters program in psychology for entry-level chemical dependency practitioner/counselor positions.

Minimum: 50 credits

HETS 230 Theories of Chemical Dependency, 4 Cr.

HETS 501(330) Diagnosis, Intervention, Counseling the Chemically Dependent Person, 4 Cr.

HETS 505 Mood Modifying Substances in Contemporary Society, 3 Cr.

HETS 501(401) Field Work, 3 Cr.

OR

PSY 501(401) Field Work, 3 Cr.

HETS 581 Human Sexuality, 3 Cr.

OR

PSY 524 Human Sexuality, 3 Cr.

HETS 696 Internship, 12 Cr.

OR

PSY 696 Internship, 12 Cr.

PSY 528	Psychodynamics of the Family, 3 Cr.
PSY 530	Introduction to Community Counseling, 3 Cr.
PSY 584	Introduction to Psychopharmacology, 3 Cr.
PSY 651	Counseling Theories, 3 Cr.
PSY 666	Small Group Counseling Process, 3 Cr.
PSY 668	Counseling Procedures, 3 Cr.
PSY 698	Group Practice, 3 Cr.

Program Inquiries

For program information, write Marilyn A. Jensen, Ph.D., Department of Psychology, St. Cloud State University, St. Cloud, Minnesota 56301. Telephone: (612) 255-4157.

Admissions Procedure

Enrollment in the certificate program is limited to students admitted to the Masters program in psychology. The student must also complete the following requirements for admission into the certificate program:

1. Complete a personal data form with an accompanying letter of application.
2. Provide three letters of recommendation.
3. Provide written verification of one year of abstinence from drugs if chemically dependent and in recovery.
4. Successively complete a personal interview with the coordinators of the certificate program and representatives from chemical dependency treatment centers. Attention will be given to previous work and life experiences, scholarship, emotional maturity, interpersonal skills, and commitment to the field of chemical dependency. Admission interviews are conducted each quarter.

Internships

The internship experience involves 400 hours of supervised training in an inpatient chemical dependency treatment center in Central Minnesota and surrounding communities. Sites include public and private treatment facilities for adolescents and adults, regional human service centers, and veterans hospitals. Acceptance for internship requires approval of the internship review committee following the completion of all course work. An additional 300 hours of supervised training in a non-CD treatment setting is required to complete the requirements of the student's counseling emphasis area.

COURSE DESCRIPTIONS

518. History and Schools. Systems, experiments, personalities in the development of modern psychology; comparative study and analysis of systems; contribution of outstanding persons. Enrollment limited to seniors and to others by permission of the instructor. 4 Cr. F, W, S.

519. Professional and Scientific Ethics in Psychology. The study of current ethical standards for psychologists as set by national and state associations, organizations, agencies, courts and legislative bodies. Enrollment is limited to seniors and to others by permission of instructor. 3 Cr. F, W, S.

521. Organization and Administration of Guidance Services. A study of the system and components of a secondary school guidance program; includes philosophy and management principles. 3 Cr. DEMAND.

523. Counseling Older Persons. Train students in basic counseling skills for older persons. Focus will be upon counseling needs regarding special needs of: expressing feelings of loss, identifying new life goals, and adjusting to the emotional stresses of aging. Prereq.: SSCI 208 or PSY 345 or SOC 350 or consent of instructor. 3 Cr. DEMAND.

525. Psychology of Human Sexuality. A comprehensive overview including psychosexual development, sexual behavior and response patterns, the psychodynamics of sexual responsibility, and individual enrichment. This course includes some sexuality explicit materials. Prereq.: permission of instructor. 3 Cr. W, S.

527. Sexual Attitude Reassessment Seminar. An intensive experiential seminar providing an opportunity to reassess personal sexual attitudes through large and small group sessions. Topics are introduced through a variety of multi-media methods which include some sexually explicit materials. Prereq.: permission of instructor. 1-4 Cr. W, S.

528. Psychodynamics of the Family. Focuses on the psychological inter-relationships between and among members of a union as they face developmental stages of life. Selected theories of personality and counseling will be studied in relation to the problems and issues in families. 3 Cr. SUM, DEMAND.

- 529. Introduction to Vocational Evaluation.** Provides students with an overview of methods of vocational evaluation which will include principles of vocational evaluation, work samples, situational assessment, and report writing. Special emphasis will be placed upon laboratory experiences. Prereq.: 362 or 665 or equivalent. 3 Cr. DEMAND.
- 530. Seminar.** _____ Selected topic in special areas in psychology. 1-4 Cr. May be repeated to max. of 9 Cr. DEMAND.
- 531. Positive Behavioral Discipline.** Use of the principles of behavior analysis in facilitating student academic and social performance in the classroom. 3 Cr. DEMAND.
- 532. Instrumentation I: Laboratory Equipment.** The use of psychological laboratory equipment including electromechanical and solid-state control, interface, environmental and data-recording devices. 3 Cr. DEMAND.
- 533. Applied Behavior Analysis I.** Introduction to the principles and techniques of behavior analysis in applied settings with particular emphasis on the design, implementation, measurement and evaluation of behavior analysis procedures. Prereq.: 231. 3 Cr. F.
- 534. Applied Behavior Analysis II.** Advanced applied behavior analysis techniques. Emphasis on design, assessment and evaluation of behavior change procedures. Current issues. Prereq.: 231, 433-533. 3 Cr. W.
- 535. Experimental Analysis of Behavior I.** An experimental analysis of complex behavioral repertoires based upon the principles of behavior analysis. Analysis of complex sequences of behavior, conditioned reinforcement, concurrent operants, stimulus control, avoidance behavior and punishment. Prereq.: 231. 3 Cr. DEMAND.
- 536. Experimental Analysis of Behavior II.** Advanced consideration of following topics as well as others: classical conditioning autoshaping, response-independent reinforcement, behavioral pharmacology, behavioral contrast, matching to sample, schedules of reinforcement. Prereq.: 231, 435. 3 Cr. DEMAND.
- 539. Abnormal Psychology.** Study of functional and organic deviations in order to understand normal behavior of the human personality with greater clarity and precision. 3 Cr. F, W.
- 541. Psychology of Childhood.** Early, middle and later childhood: principles and philosophy of growth. Prereq.: 262 or 241. 3 Cr. F.
- 542. Psychology of Adulthood.** Adulthood from the end of adolescence to retirement. Problems associated with adulthood in American culture. Prereq.: 262 or 241. 3 Cr. S.
- 543. Psychology of Adolescence.** An investigation of selected topics and issues concerning adolescent development based on original research sources. Prereq.: 241 or 262. 3 Cr. W.
- 545. Play in Childhood.** A study of the natural spontaneous play of the child and the changes in play forms over time. The relationship of play and playfulness to personality development. An overview of play interpretations from the classical through contemporary theories. Review of investigations, studies, and literature; and development of observation procedures. Prereq.: a course in human growth and development or consent of instructor. 3 Cr. DEMAND.
- 546. Violence in the Family.** The extent of the problem and the psychological implications of violence in the family—including child abuse and neglect, incest/sexual abuse and spouse abuse. The Minnesota Law pertaining to such violence, some theories on the cause of family violence, some treatment strategies and prevention. 2 Cr. F.
- 556. Psycholinguistics.** The effect of language on cognitive processes will be examined with a focus on sentence comprehension, speech perception, memory for prose, bilingualism, and linguistic relativism. Prereq.: 252. 3 Cr. DEMAND.
- 559. Psychology of Sleep and Dreams.** Basic concepts and discoveries from theory and research on the sleeping and dreaming process and the interpretation of dreams. 3 Cr. DEMAND.
- 565. Stress Management.** Designed to provide an understanding of the nature of stress disorders, knowledge about assessment procedures, and strategies with which to control stress reactions. 3 Cr. DEMAND.
- 566. Life Style Assessment and Planning.** Designed to examine human life style issues and the relationship between developing optimum human potential. Participants will assess their own life's activities and philosophies with intent to develop a plan for improving their quality of living. 3 Cr. DEMAND.
- 573. Aggression, Anger, and Violence.** Survey of psychological theories and research regarding the origins and determinants of human and animal aggression. Application to specific interest areas (e.g., alcohol, pornography, etc.). 3 Cr. W, S.
- 574. Interpersonal Dynamics.** Survey of research, experimentation, and theory of relationships between the individual and the group; interpersonal communication, influence, group structure and function, leader-member relations. 3 Cr. F, SUM.
- 577. Research on Psychology of Women.** In-depth study of selected topics in current psychological research dealing with women and women's issues. 3 Cr. DEMAND.
- 578. Theories of Personality.** Basic theoretical concepts, factors of vital relationships within

the individual personality, interpersonal relationships, individual and field frames of reference as they relate to mental health. 3 Cr. DEMAND.

582. Motivation. Theory and research in animal and human motivation; physiological, social, and personal aspects of motivation; basic, deficit, derived, growth motivation. 3 Cr. DEMAND.

584. Introduction to Psychopharmacology. Information about how drugs have their effects as well as specific effects of drugs. Factors, pharmacological and behavioral, altering a drugs action. Prereq.: 115. 3 Cr. W, S.

586. Physiological Psychology. Survey of research establishing the physiological and biochemical correlates of such phenomena as arousal, emotion, motivation, learning and memory. Prereq.: BIOL 104 or equivalent. 3 Cr. DEMAND.

587. Comparative Psychology. A survey of reflexive and learned animal behavior emphasizing similarities and differences in learning across species. Prereq.: 115, 216, 217, 282. 3 Cr. DEMAND.

589. Psychology of Learning. Psychological theories of learning will be presented with a focus upon current research, contemporary theories and models of learning. Both animal and human research in the areas of learning and constraints upon learning will be examined. Prereq.: 115, 216, 217. 3 Cr. F.

590. Mental Hygiene. Characteristics of wholesome personality, methods and aims of mental hygiene; personal development and techniques of effective adjustments. Prereq.: 262. 3 Cr. DEMAND.

591. Psychology of Sport. Examining sport in terms of participant/spectator motivation and performance. Special emphasis is given to the relationship of sport to human development and adjustment. 3 Cr. DEMAND.

592. Guidance for the Handicapped. Special problems. Counseling with children and parents. Psychological, aptitude, achievement tests. 3 Cr. W, S, SUM.

593. Individual Appraisal. Methods of individual appraisal; psychological measurement of individuals; instruments used to appraise intellectual efficiency, aptitude and achievement, sensory capacities and efficiency, sensory-motor coordination, group status, personal history; synthesizing data and report writing. Prereq.: 463 or 665. 3 Cr. SUM.

594. Introduction to Clinical Psychology. Overview of the clinical approach to assessment of individuals and techniques for behavioral change as used in clinical, educational, and industrial settings. Prereq.: 439-539. 3 Cr. DEMAND.

596. Psychology of Exceptional Children. Clinical observation of children who have special problems of growth and development, physical and mental handicaps; mentally gifted; behavior disorders. Prereq.: SPED 505. 3 Cr. F, S, SUM.

597. Psychology of Mental Retardation. Etiology, characteristics, classification, diagnosis, assessment. Social control. Role of family, school, community agencies. 3 Cr. F, W, S, SUM.

COURSES FOR GRADUATE STUDENTS ONLY

617. Psychological Assessment I. Overview of instruments to assess personality, interests and attitudes. Emphasis will be on (1) familiarity with techniques of personality assessment, (2) understanding of reports on personality from other mental health specialist, (3) mental health screening techniques, such as mental status interviewing, (4) selection, administration and interpretation of interest and attitude tests. Prereq.: 593. 3 Cr. DEMAND.

618. Psychological Assessment II. Overview of instruments to assess personality, interests and attitudes. Prereq.: 617. 3 Cr. DEMAND.

641. Single-Case Design. The analysis and utilization of single case experimental designs and data analysis procedures for evaluating behavioral change strategies employed in applied behavior-intervention programs. 3 Cr. DEMAND.

642. Research Planning and Reporting. Effective ways of reading and critiquing journal articles, selecting a research problem, reviewing the literature, preparing a research proposal, writing and reporting of research procedures and results will be covered. Emphasis on behavioral research. Prereq.: 641. 3 Cr. W.

643. Social Skill Development: A Behavioral Approach. Theory and applications in the assessment and design of behavioral programs for social skills training will be covered. Prereq.: 434-534. 2 Cr. DEMAND.

644. Academic Skills Training: A Behavioral Approach. Theory and applications in the assessment and design of behavioral programs for academic skills training will be covered. Prereq.: 434-534. 2 Cr. DEMAND.

645. Program Support Skills. Procedures for developing funding proposals, providing consultative and staff development services and conducting program evaluations will be presented. 3 Cr. DEMAND.

647. Introduction to Community Counseling. An introduction to the field community counseling with emphasis on: principles, ethics, philosophy, issues and current problems in the area of community counseling. Also included: various community counseling settings and role of the counselor within these settings. 3 Cr. W.

- 648. Career Development for Women's Lifespan.** Study of career development for women as life long process. Examination of past influences, present theories and future trends based on research. Remediation techniques and methods, assertive planning will be emphasized. Coreq.: 649. 3 Cr. SUM, DEMAND.
- 649. Affirmative Counseling of Women.** Examines trends and new approaches for affirmative counseling practices for women's lifespan based on research findings and the current scene. Coreq.: 648. 3 Cr. SUM, DEMAND.
- 650. Introduction to Rehabilitation.** Orientation to the rehabilitation process including a survey of the history, principles, philosophy and legal aspects of rehabilitation and related fields. 3 Cr. F.
- 651. Counseling Theories.** Consideration of selected theories of counseling with consideration given to application in various counseling settings. 3 Cr. F.
- 652. Medical Factors in Rehabilitation Counseling.** The etiology, prognosis methods of treatment, effects of disabling conditions and implications for the counselor. 1-3 Cr. May be repeated to max. of 9 Cr. S.
- 653. Psychological and Sociological Aspects of Disability.** The emotional and psychosocial factors associated with various disabilities. 3 Cr. May be repeated to max. of 6 Cr. SUM.
- 655. Seminar in Rehabilitation Counseling.** _____ Special topics in the field. 1-3 Cr. May be repeated to max. of 9 Cr. DEMAND.
- 656. Placement in Rehabilitation.** Procedures for placing the job-ready client, study of sources of information about jobs, job analysis, and personnel policy. 3 Cr. DEMAND.
- 658. Rehabilitation Planning and Case Management.** Principles, procedures and techniques of vocational diagnosis, planning and case management. 3 Cr. W.
- 663. Applied Theories of Learning.** Principles of psychology of learning and experimental findings; application to problems encountered in teaching and learning; examination of theories of learning. 3 Cr. DEMAND.
- 665. Appraisal Techniques.** Analysis of appraisal techniques used in counseling. Information, sources, assembly, and use in the counseling process. 3 Cr. DEMAND.
- 666. Small Group Counseling Process.** Didactic instruction in small group process and practice in such process. Lecture and laboratory. 3 Cr. DEMAND.
- 667. Career Development.** Consideration of some of the more outstanding theories, materials, procedures and problems pertinent to the counselor's work in the area of career development and decision making. 3 Cr. DEMAND.
- 668. Counseling Procedures.** Techniques, procedures, and practices employed in counseling; including practice in counseling. 3 Cr. F.
- 669. Supervised Counseling Practicum.** Advanced application of theory and techniques to counseling. Prereq.: 651, 665, 667, and 668. 3-6 Cr. May be repeated to max. of 9 Cr. DEMAND.
- 670. Developmental Psychology.** Advanced course in human growth and development, emphasis on trends, problems, theoretical considerations, and contemporary research. 3 Cr. S ALT.
- 671. Introduction to Marriage and Family Counseling.** An introduction to this emerging field and profession. It will introduce the student to some of the basic approaches and issues involved in the field. Prereq.: 651, 668. 3 Cr. W.
- 672. Family Counseling; Theory and Techniques.** The course is for students who are interested in marriage and family counseling. The course will help these students gain an understanding of counseling theory and technique as applied to the field of marriage and family counseling. Prereq.: 671. 3 Cr. S.
- 673. Advanced Procedures.** Designed to provide knowledge and skills in assessment of client problems establishing counseling goals and applying counseling strategies to assist the client in resolving problems. Prereq.: 668. 3 Cr. DEMAND.
- 674. Consultation.** Examination of various consultation models and use of these models in several settings. Knowledge and skills as well as personal/professional attributes needed by the consultant. 3 Cr. DEMAND.
- 676. Developmental/Preventative Procedures.** An overview of the developmental theories of Erickson, Havighurst and Kohlberg. Demonstrations and construction of procedures designed to enhance normal psycho-social development. 3 Cr. DEMAND.
- 677. Seminar in Counseling.** Careful consideration of problems, issues, and research in professional counseling. Prereq.: 678. 3 Cr. SUM.
- 678. Introduction to Graduate Statistics.** A review and extension of correlation and regression analysis; introduction of probability and sampling theory; estimating population parameters; testing hypothesis. Familiarity with descriptive statistics assumed. 3 Cr. F, W, S, SUM.
- 679. Seminar: Research Planning.** Consideration of research design and tools. Development of project outline within the interest area of each student and presentation for critical review to members of the seminar. 3 Cr. F.
- 680. Organizational Psychology.** Psychology of individual and group behavior in the

organizational complex; contemporary research and implications for administration and management; motivation, influence, communication, group processes, leadership, supervision. 3 Cr. DEMAND.

685. Individual Intelligence Testing. Assessment of individual intelligence examined historically, with emphasis on selection, administration, interpretation of tests of general intelligence with emphasis on Stanford-Binet and Wechsler tests. Prereq.: 593, 617. 3 Cr. DEMAND.

689. Seminar: Research Reporting. Reporting of research planned in 679 and subsequently implemented. Preparation of reports in accordance with APA publication standards and presentation to seminar. Prereq.: 679. 3 Cr. DEMAND.

696. Supervised Internship in Counseling. Supervised agency clinical experience. Prereq.: 669. 1-16 Cr. F, W.

698. Practice in Small Group Process. Supervised practice in conducting small group counseling sessions. Prereq.: 666. 3 Cr. S.

699. Thesis. 6-9 Cr. F, W, S, SUM.

Sciences (SCI)

223 MATHEMATICS AND SCIENCE CENTER/255-3009

SCIENCE COURSE DESCRIPTION

560. Selected Topics in Science Education. Intensive study of a special topic in science education. May be repeated. 1-4 Cr. DEMAND.

Social Science Program (SSCI)

Chairperson: Dena Shenk

Also see the Interdisciplinary Studies Department.

MASTER OF SCIENCE

Admission to the graduate program requires completion of at least an undergraduate minor in one of the following: social studies, economics, political science, or sociology. In some cases, the applicant may be required to complete additional undergraduate course work even though a major or minor may have been completed in one of these fields. Applicants must have completed a baccalaureate degree from an accredited college or university. Teaching applicants will complete the program described below. Applicants who do not have a background in teacher education should confer with the department chairperson. The student may elect to concentrate in economics, political science, or sociology, with some course work in the other fields, or may elect to emphasize the social sciences more equally.

At least one-half of the Master of Science degree program must be earned in courses in which enrollment is limited to graduate students.

This program is designed for full-time and part-time students. Graduate courses in the participating departments may be scheduled in either the daytime or evening schedules.

Plan A, 45 Cr.; Plan B, 48 Cr.

I. Research: Min., Plan A, 9-12 Cr.; Plan B, 3 Cr.

ED 615 Introduction to Research, 3 Cr.

SSCI 699 Thesis, 6-9 Cr. (Plan A only)

II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.

Advanced study in subject matter, methods, materials and curriculum.

III. Professional Education: Min., Plan A or B, 9 Cr.

Approval of the professional education adviser.

IV. Electives: Min., Plan A, 3-6 Cr.; Plan B, 9 Cr.

COURSE DESCRIPTIONS

560. Social Science Seminar. Analysis of issues or problems of an interdisciplinary social science nature. A specific topic will be selected each time the course is offered. 1-4 Cr. May be

repeated to max. of 9 Cr. F, W, S.

570. Area Studies Seminar. Analysis of contemporary social, political, and economic conditions of an area. A specific country or region will be selected each time the course is offered. 1-4 Cr. May be repeated to max. of 9 Cr. F, W, S.

576. Black and American: Issues in Afro-American Studies. An interdisciplinary exploration of what it means to be both Black and American. A specific topic will be listed in the class schedule. 4 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

630. Problems in the Social Sciences. An examination of the methods used and the problems faced in the various social science disciplines. Not open to students with a major or minor in social science. 3 Cr. SUM.

699. Thesis. 3-9 Cr. F, W, S, SUM.

Social Studies (SST)

Also see the Interdisciplinary Studies Department.

COURSE DESCRIPTIONS

640. Recent Trends in Teaching Social Studies in Secondary School (Topical). The secondary school social studies program viewed in light of new methods, curriculum trends, materials, and philosophies. 3 Cr. May be repeated with different topic to max. of 9 Cr. SUM.

Social Work (SW)

38 LAWRENCE HALL/255-3139

Chairperson: Nancy Brennan

Graduate Faculty: Brennan, Herbison, Martin, Stadum

SOCIAL WORK (SW) COURSE DESCRIPTION

514. Social Work and the Law. An examination of issues common to law and social work; including the legal system and its impact on the social work profession. Examines administrative and court procedures, law-making, legislation, child protection issues, social work licensure issues and legal problems of clients. Prereq.: 211, 360 or consent of instructor. 4 Cr. DEMAND.

Sociology (SOC) and Anthropology (ANTH)

105 STEWART HALL/255-2294

Chairperson: John Murphy

Graduate Faculty: Alessio, Baer, Breci, Goodrich, Harper, Lavenda, J. Murphy, Schwerdtfeger, Sherozman

The graduate courses offered by the department provide one component of the Social Science major and provide service courses to other programs. Courses may be offered in either the daytime or evening schedule.

ANTHROPOLOGY (ANTH) COURSE DESCRIPTIONS

520. Anthropology and Aging. Will focus on the aging process in cross-cultural perspective, including consideration of the effects of ethnicity on the aging experience in the U.S. Application of the methods and theory of anthropology to aging will be stressed. 3 Cr. DEMAND.

563. Seminar Discussion and Readings in Advanced Anthropology. A specific topic selected each time offered. Prereq.: ANTH 150 or permission of department chairperson. 4 Cr. May be repeated to max. of 9 Cr. W, S.

567. Principles of Cultural Anthropology. Concepts and theories of anthropology. Analysis of tribal and peasant cultures; comparison with more complex societies. 4 Cr. DEMAND.

SOCIOLOGY (SOC) COURSE DESCRIPTIONS

530. Analysis and Uses of U.S. Census of Population Data. Major focus is on content, quality, and application of U.S. Census of Population Data in the social, economic, geographic, and political spheres. Prereq.: 160. 4 Cr. DEMAND.

540. Public Opinion and Propaganda. Nature, function, formation, and measurement of public opinion; attempts to influence public opinion; propaganda. Prereq.: 160. 4 Cr. S.

542. Social Movements. Analysis of social movements; origin in discontent; role of ideas, personal relationships, organizational factors in their development. Some contemporary and social movements. Prereq.: 160. 4 Cr. W.

545. Political Sociology. An analysis of structural and ideological factors influencing the development and legitimation of political institutions and the sociological conditions influencing the political processes. 4 Cr. S.

547. World Population Problems. World population trends and pressures; their causes and consequences; war, international relations; standards of living; technological change; and cultural contrasts. Prereq.: 160. 4 Cr. DEMAND.

562. Seminar. Discussion, readings, evaluation of sociological theory, social issues, or contemporary events. A specific topic selected each time offered. Prereq.: 160. 1-4 Cr. May be repeated to max. of 9 Cr. DEMAND.

565. Social Psychology. Survey of the field of social psychology from a sociological perspective. Topics include theories of social psychology, socialization, self, social interaction, communication, and deviance. Prereq.: 160 or consent of instructor. 4 Cr. F, W, S, SUM.

570. Minority Group Cultures and Contributions. Minority-group cultures and contributions and the position of minority groups in American society. Different minority groups will be focused upon in the course. 4 Cr. S.

572. Sociology of the Family. The family as a dynamic institution; relations to other institutions; research based variations and trends in family life. Prereq.: 160. 4 Cr. S.

573. Sociology of the Elderly Family. The elderly family's structure, function and change as social system are analyzed from the sociological perspective. Current research and theory are used in discussing the variations in the elderly family's structure, interaction patterns and life styles in the United States at the present time. 4 Cr. DEMAND.

575. Sociology of Health and Illness. Study of the sociocultural aspects of illness, health, treatment, health care delivery and the social organization of health care. Current issues and specific topics will be discussed. Prereq.: 160 or consent of instructor. 4 Cr. W.

579. Using SPSSX in the Social Sciences. Hands-on experience is attained in using one of the most powerful mainframe software packages available. Students are taken through the various steps of organizing, cleaning, transforming, and analyzing data as is typically done in the social sciences. Prereq.: 270 or equivalent statistics class. 4 Cr. S.

585. Contemporary Sociological Theory. Systematic organization of concepts and principles for the explanation of social phenomena and as a guide to contemporary sociological research. Prereq.: 160. 4 Cr. F, W, S, SUM.

590. Field Methods in Anthropology. Anthropological field methods in one of the major subdisciplines of anthropology; archaeology, ethnography, or linguistics. Consent of instructor. 1-8 Cr. SUM.

SOCIOLOGY (SOC) COURSE DESCRIPTIONS FOR GRADUATE STUDENTS ONLY

650. Sociology of Aging: Theories and Research. Focus on the current developments in sociological theory and research techniques and findings in the study of age, aging, and death and dying. 4 Cr. S.

Special Education (SPED)

A211 EDUCATION BUILDING/255-2041

Chairperson: Sandra Reese

Graduate Faculty: Ayers, Bigler, Gadberry, R. Johnson, J. Lewis, F. Reese, S. Reese, Wellik, S. Williams

MASTER OF SCIENCE-Special Education

The Department of Special Education offers program plans leading to a Master of Science degree. The student's program of study may be designed to emphasize education of the educable mentally handicapped, the trainable mentally handicapped, the learning disabled, the emotionally disturbed, or the gifted and talented. An early childhood/special needs licensure is also available in a joint program with the Center for Child and Family Studies. An introductory course on the education of exceptional is required for admission to this program.

PLAN A: Thesis

Students pursuing the Plan A are required to complete a minimum of 12 credits in research, 15 *graduate only* credits in the major field and a minimum of 45 credits. The final product prepared by the student is a research based thesis. Preliminary and final oral examinations over the thesis are required.

PLAN B: Starred Papers

Students pursuing the Plan B option are required to complete a minimum of 6 credits in research, 15 *graduate only* course work in their major field, and a minimum total of 48 credits. The final product prepared by the student is three starred topical papers. Preliminary and final oral examinations over the starred paper topics are required. In addition, a written comprehensive examination is required.

PLAN C: Professional Portfolio

This plan is designed for the professional practitioner whose primary goal is to improve her/his qualifications and performance as a classroom teacher within the structure of a master's degree program. Students pursuing the Plan C option are required to complete 3 credits of research, 15 credits of *graduate only* course work in their major field, and a minimum total of 54 credits. The final product prepared by the student is a professional portfolio. Preliminary and final oral examinations over the professional portfolio are required. In addition, a final written comprehensive examination is required. The Master's degree program is designed for either full-time or part-time students. Full-time students may expect to complete part of their course work in evening classes. Part-time students can complete much of their course work in evening classes, but can be expected to attend some summer session courses.

Plan A, 45 Cr.; Plan B (Starred Papers), 48 Cr.; Plan C (Professional Portfolio), 54 Cr.

- I. Research: Min., Plan A, 12-15 Cr.; Plan B, 6 Cr.; Plan C, 3 Cr.
 - SPED 602 Research in Special Education, 3 Cr. (Required for Plans A, B, and C)
 - SPED 699 Thesis, 6-9 Cr. (Plan A only)
 - PSY 678 Introduction to Graduate Statistics, 3 Cr. (Required for Plans A and B)
- II. Major: Min., Plan A, 18 Cr.; Plan B, 24 Cr.; Plan C, 24 Cr.
 - SPED 601 Current Trends in Special Education, 3 Cr.
 - SPED 603 Problems in Special Education, 3 Cr.
 - SPED 690-694 Topical Seminars, 6 Cr.
- III. Professional Education: 6 Cr.
 - Courses from education and psychology selected with adviser.
- IV. Electives: Min., Plan A, 3-12 Cr.; Plan B, 12 Cr.; Plan C, 6 Cr.
- V. Educational Applications and Implementation: Min., Plan C only, 15 Cr.

FIFTH YEAR PROGRAM—Special Education

A Fifth Year program is also available primarily for those who are interested in obtaining a special education license. Admission to this program is through the School of Graduate and Continuing Studies (see pages 28-29). An undergraduate grade point average of 2.25 is required for admission to this program.

SPECIALIST DEGREE—Special Education Administration

This degree is designed to prepare individuals for leadership positions in special education, particularly as administrators of special education programs in the public schools. Satisfactory completion of the degree results in a recommendation for licensure as a supervisor of special education in Minnesota.

The applicant for the Specialist degree must complete an approved program which consists of a minimum of 45 quarter hours of graduate credit including a field study of nine credits.

An Approved Program will be developed jointly with the student and the adviser at the time of admission and will be based on the licensure requirements, the background of the student, and the role the candidate expects to assume.

This degree must be completed within seven years of the date of the first course which applies to this program with a minimum of 30 credits in the program being completed at St. Cloud State University.

Candidates who expect to be recommended for licensure as a supervisor of special education in Minnesota must have full licensure in a program area of special education and have three years of experience in that area.

Requirements for admission to the program are as follows:

(1) completion of a master's degree program in special education or completion of 45 credits in a graduate program with an emphasis in special education, (2) a grade point average of 3.25 on credits earned for the master's degree. For students who have not completed a master's degree, a grade point average of 3.25 is required on all completed graduate credits and the candidate must meet the requirements for admission to a master's degree, (3) licensure in any program area of special education (including school psychology or school social work), (4) graduate courses in research, graduate statistics, and current trends in special education, (5) completion of the Graduate Record Examination aptitude test. The Approved Program consists of the following:

- I. Research Required: SPED 698 Field Study Research, 3-9 Cr.
or SPED 699 Thesis, 6-9 Cr.

(Candidates must have completed graduate courses in statistics and research before registering for the field study or thesis)

- II. Major: Special Education Administration, 24 Cr.

Required: SPED 610 Supervision and Administration of Special Education I, 3 Cr.
SPED 613 Supervision and Administration of Special Education II, 3 Cr.
SPED 654 Practicum in Special Education Administration, 3 Cr.
EDAD 650 School Law, 3 Cr.
EDAD 604 School Finance, 3 Cr.
EDAD 677 Personnel Administration of Education, 3 Cr.
EDAD 602 School Business Management I, 3 Cr.
Electives: 3 Cr.

- III. Special Education: A minimum of 12 credits selected in consultation with adviser.

COURSE DESCRIPTIONS

502. Introduction to Education of the Hearing Impaired. Background and history, etiology, and achievement, relationship to intelligence, socio-emotional development. Parent consultation. Integration into school program. Adult adjustment. 3 Cr. S.

503. Foundations in Special Education I. Historical and philosophical background, handicapping conditions and their implications, legal bases, resources, and advocacy. 3 Cr. F, W, S, SUM.

504. Cultural Diversity and Education. Problems of cognitive, linguistic, social, and emotional development. Preschool, elementary and secondary school programs. Role of supportive agencies. 3 Cr. F, W, S, SUM.

505. Behavior Problems in the School. Introduction to the assessment and management of behavior problems in the classroom. Prereq.: PSY 262, 362, or CDIS major. 3 Cr. F, W, S, SUM.

506. Management of Individuals with Multiple Handicaps. Characteristics, etiology and teaching strategies of individuals with multiple handicaps including: orthopedic conditions, chronic illness, sensory impairments, and other health impairments. 3 Cr. W, S, SUM.

507. Education of Children with Learning Disabilities. Introduction to learning disabilities. Survey of approaches to instruction. Laws and regulations governing disability programs. 3 Cr. DEMAND.

508. Developmental Screening and Assessment of Young Children. To familiarize participants with the philosophy, procedures and methodologies used to conduct developmental screening. 3 Cr. DEMAND.

509. Foundations in Special Education II. Curriculum design and adaptation, interface of special education and regular education, individual and group management, delivery systems. Prereq.: 503. 3 Cr. W, S, SUM.

512. Psycholinguistics. Introduction to psycholinguistics. Symbolic processes involved in communication. Interpretation of data. 3 Cr. F, W, S, SUM.

520. Education of the Severely and Profoundly Retarded. Evaluation and planning for the severely and profoundly retarded in public school programs, institutions, and community based residential facilities. Analysis of materials and methods. Prereq.: 503. 3 Cr. F, W.

521. Education of the Severely Handicapped II: Curriculum Content. Curriculum content areas for educational programs for individuals with moderately, severely, or profoundly handicapping conditions. Prereq.: 420-520. 3 Cr. W, S, SUM.

522. Education of the Gifted. Identification, characteristics, instructional programs and educational problems. 3 Cr. DEMAND.

523. Methods and Materials in Special Education I. Selection of children and organization of school programs for mentally retarded and orthopedically handicapped. Curriculum adjustment, teaching methodologies. Prereq.: 503. 3 Cr. DEMAND.

524. Methods and Materials in Special Education II. Analysis of curricular materials for mentally retarded and orthopedically handicapped. Observation and participation. Prereq.: 423-523. 3 Cr. DEMAND.

525. Special Learning Disabilities I. Techniques of identification and evaluation of children with learning difficulties associated with language, emotional, and perceptual problems. Prereq.: 427-527, 503. 3 Cr. W, SUM.

526. Special Learning Disabilities II. Instructional methodology and treatment for children with learning disabilities. Prereq.: 425-525. 3 Cr. S, SUM.

527. Teaching Basic Skills to Handicapped Learners. Principles of teaching basic skills and their application to the development of skills in handicapped learners diagnostic procedures. Prereq.: 503 and background in developmental reading and developmental mathematics. 3 Cr. F, W, S, SUM.

528. Learning Problems in the Classroom I. Characteristics and needs of special education students in the regular classroom. Survey of special programs. 3 Cr. DEMAND.

529. Learning Problems in the Classroom II. Curricular adaptations and instructional methods for working with handicapped students in the regular classroom. Survey of materials. Prereq.: 528. 3 Cr. DEMAND.

530. Learning Problems in the Classroom III. Planning and implementation of individual instructional programs designed to meet specific needs of students with learning problems. Prereq.: 529. 3 Cr. DEMAND.

531. Career and Vocational Planning for the Special Needs Student. Initiation and maintenance of vocational education programs for the special needs student. Educational models, job analysis, employer-school relations, laws and regulation. 3 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

601. Current Trends in Special Education. Current trends including methods and materials, assessment procedures, and innovations in service systems. An introductory course for graduate students. 3 Cr. F, W, SUM.

602. Research in Special Education. Techniques and interpretations of research in special education. Problem definition, research design, reporting results. 3 Cr. F, W, SUM.

603. Problems in Special Education. Seminar in problems and issues relating to programming for exceptional children in the schools. Content determined according to background and interests of the students. 3 Cr. F, S, SUM.

605. Behavioral Analysis for Handicapped Children. Analysis of symptom development and educational problems in handicapped children according to the principles of learning. Prereq.: 405-505. 3 Cr. F, S, SUM.

610. Supervision of Special Education. Methods, staff development, curriculum development, administrative relationship. 3 Cr. W, SUM.

613. Administration of Special Education. Role of special education administration in school management system. Planning, programming, and evaluating service delivery systems. Local, state and federal resources. 3 Cr. S, SUM.



- 620. Teaming, Community Resources, and Service Delivery Systems.** Introduction to principles of group process, team staffing, and cooperative program planning and service delivery. Teaming of parents, educational staff, and related services to handicapped. Lab. arranged hours required. 3 Cr. DEMAND.
- 621. Seminar: Intervention Approaches with Behavior Problem Children.** Analysis of various intervention approaches for the management and education of disturbed children. Attention will be directed toward programs/models which utilize differing psycho-educational dynamics in the education of emotionally disturbed children. Prereq.: PSY 596 or permission of department. 3 Cr. F, SUM.
- 622. Seminar: Education of Emotionally Disturbed Children in the Regular Classroom.** Analysis of educational programming needs and models for the disturbed child/adolescent who is in the regular classroom. Attention will be focused on developing competencies necessary for the special educator to serve as an effective resource consultant as well as supplying direct services to the disturbed child within a mainstream setting. Prereq.: 527, 621. 3 Cr. W.
- 623. Seminar: Education of Emotionally Disturbed Children in Specialized Settings.** Analysis of educational programming models and psycho-educational techniques for the more seriously disturbed child/adolescent in specialized settings. Included would be psychiatric settings, residential and day schools for disturbed children and correctional programs. Prereq.: 621, 622. 3 Cr. S.
- 624. Seminar: Differentiated Instruction for Gifted/Talented.** Strategies for developing, adapting, and evaluating curriculum for gifted and talented children. Emphasis on individualization and applications of strategies. 3 Cr. W.
- 625. Seminar: Enhancing Creativity.** A study of the nature of creativity, examination of obstacles, and approaches that enhance creative development. 3 Cr. S.
- 633. Educational Strategies with Young Handicapped Children.** This course is designed to review knowledge of basic concepts of individualized education for handicapped children and provide an understanding of curriculum, materials, and methodology necessary for providing educational services to young handicapped children. 3 Cr. DEMAND.
- 650. Practicum in Moderately, Severely, and Profoundly Handicapped.** Supervised practicum in teaching moderately, severely, and profoundly handicapped children. Prereq.: 520 and 521, permission of department. 3-8 Cr. F, W, S, SUM.
- 651. Practicum in Special Education.** Supervised experiences in a special education program, vocational program or college programs. Prereq.: permission of department. 3-8 Cr. F, W, S, SUM.
- 652. Practicum in Special Learning Disabilities.** Supervised practicum in teaching children with learning disabilities taken concurrently with 525 and 526. Prereq.: permission of department. 3-6 Cr. May be repeated to max. of 6 Cr. W, S, SUM.
- 653. Practicum with Gifted and Talented.** Supervised experience in teaching gifted and talented students. Prereq.: 623 and 624 or concurrent registration and permission of the department. 1-6 Cr. DEMAND.
- 654. Practicum in Special Education Administration.** Supervised experience in the schools with directors of special education. Prereq.: 610, 613, or permission of department. 3 Cr. F, W, S.
- 655. Practicum in Emotionally Disturbed.** Supervised experience in a public school

program for children who are emotionally disturbed. Prereq.: 621, 622, 623 and permission of department. 3-6 Cr. DEMAND.

657. Practicum in Special Education. Supervised practicum in teaching young (ages birth to 6) handicapped children. Prereq.: permission of department. 1-4 Cr. DEMAND.

698. Field Study. 3-9 Cr. F, W, S, SUM.

699. Thesis. 6-9 Cr. F, W, S, SUM.

Speech Communication (SPC)

209 PERFORMING ARTS CENTER/255-2216

Chairperson: Charles Vick

Graduate Faculty: A. Grachek, Kendall, Litterst, Mudd, Mumby, Pribble, Ross, Sikkink, Stocker, Vick, Vora

Graduate courses are offered primarily in the daytime schedule and in the evening on a four-year rotation.

PERMANENT WORKSHOP DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to page 27 to determine the maximum number of workshop credits which may be applied to graduate degrees.

575. Workshop: Problems in Intercultural Communication. This advanced workshop in intercultural communication utilizes communication theory in order to analyze major conflicts and problems that are most likely to occur when individuals of different cultures communicate. 4 Cr. DEMAND.

COURSE DESCRIPTIONS

511. Speechwriting. Intensive study of rhetorical principles of speech composition through model speeches and speechwriting practice. Prereq.: 220 or permission of instructor. 4 Cr. DEMAND.

515. Critical Approaches to Public Communication. Concepts, terminology, methods and literature of rhetorical criticism. Prereq.: 220 or consent of instructor. 4 Cr. F.

520. Theories of Persuasion. The elements of persuasion, including psychological and sociological theories, communication concepts and models, and analysis of communication situations and systems. Speaking and criticism. Prereq.: 220 or instructor consent. 4 Cr. F, W, S.

526. Intimate and Family Communication. Study of communication patterns between persons involved in an affectionate relationship. Experiential exercises and selected readings. Prereq.: 226 or consent of instructor. 4 Cr. DEMAND.

530. Modern Theories of Communication. Introduction to theories of human communication including theories of the neurophysiological, perceptual and semantic foundations of communication and theories and models of human interaction. 4 Cr. F, W, S.

531. Contemporary Approaches to Oral Interpretation. Performance, analysis and discussion of selected literary genres, selected performance styles, or performance criticism. Specific topics will be announced. Prereq.: 331. 4 Cr. May be repeated to a max. of 9 Cr. DEMAND.

539. Communication and the Aging Process. An investigation of the interface between communication and the aging process. Consideration given to the position of the older person in communicative transaction. 4 Cr. DEMAND.

540. Advanced Public Speaking. Exploration in depth of speech principles through speech making and selected readings. 4 Cr. DEMAND.

552. Teaching of Speech Communication. Materials and methods for curricular and co-curricular teaching of speech communication in secondary schools. Must precede student teaching. Prereq.: 15 Cr. in SPC. 4 Cr. F.

579. Communication and Modern Leadership. Awareness of modern leadership by utilizing rhetorical and communication theory to analyze and interpret the meaning of leadership in groups and modern organizations—business, industry, and government. Prereq.: 325, 326, 327, or consent of instructor. 4 Cr. DEMAND.

580. Seminar in Speech Communication. Discussions and readings in advanced speech topics. A specific topic will be listed each time offered. Prereq.: senior/graduate standing or permission of instructor. 4 Cr. May be repeated to max. of 8 Cr. DEMAND.

Teacher Development

A132 EDUCATION BUILDING/255-3007

Chairperson: Kenneth Kelsey

Graduate Faculty: Bavery, Bjorklund, Hagen, Heine, Hornstein, Kelsey, Ludeman, G. Mortrude, L. Mortrude, Purdom, Putbrese, Romanish, Rouch, Schmidt

The following programs are designed for both full-time and part-time students. Most courses are offered evenings during the academic year and during the daytime in the summer.

MASTER OF SCIENCE—Curriculum and Instruction

An applicant for this degree must have completed an undergraduate teacher education program from an accredited teacher preparation institution. Candidates must meet all the standard entrance requirements for graduate studies at this university. Candidates may select one of four tracks appropriate to their needs and interests.

Track I: Elementary School Education

Track II: Middle School/Junior High School Education

Track III: Senior High School Education

Track IV: Reading Teacher Education

Track I: Elementary School Education

To gain admission to Track I, a student must have a bachelor's degree with a major in elementary education from an accredited institution. Two years of teaching experience at the elementary school level is regarded as desirable background.

Before a student is admitted to Track I, he/she must satisfactorily complete ED 620, Seminar: Introduction to Graduate Studies in Elementary Education. ED 620 must be taken during the first or second quarter of graduate study. After completion of ED 620 and admission to Track I, each student files a planned program of studies. The program, planned with and approved by the adviser, must include a minimum of one-half of the credits to be earned in 600 level courses.

Plan A, 48 Cr.; Plan B, 51 Cr.; Plan C, 54 Cr.

I. Research: Min., Plan A, 12 Cr.; Plan B, 6 Cr.; Plan C, 3 Cr.

Select from the following as needed:

PSY 678 Introduction to Graduate Statistics, 3 Cr. (Required Plan B)

ED 614 Interpretation of Research, 3 Cr.

ED 615 Introduction to Research, 3 Cr. (Required Plan A)

ED 653 Current Instructional Research, 3 Cr.

ED 673 Reading: Investigation of Research and Interpretation of Design, 3 Cr.

ED 699 Thesis, 9 Cr. (Required Plan A)

II. Major: Min., Plan A, 33 Cr.; Plan B, 36 Cr.; Plan C, 45 Cr.

A. Prescribed:

ED 620 Seminar: Introduction to Graduate Studies in Elementary Education, 3 Cr.

ED 623 Elementary Education: Contemporary and Future, 3 Cr.

ED 646 Elementary School Curriculum, 3 Cr.

B. Professional Education: Min., Plans A and B, 9 Cr.; Plan C, 6 Cr.

Elect, with adviser's approval, appropriate courses from the Professional Education Core.

C. Teaching Field: Min., Plans A and C, 15 Cr.; Plan B, 18 Cr.

Elect, with adviser's approval, appropriate courses in elementary education.

D. Educational Applications and Implementations: Min., Plan C only, 15 Cr.

III. Electives: Min., Plan A, 3 Cr.; Plan B, 9 Cr.; Plan C, 6 Cr.

Track II: Middle School/Junior High School Education

This track is designed for current or prospective middle school teachers possessing elementary or secondary teaching licensure who desire a Master of Science degree in Curriculum and Instruction and licensure as a middle school teacher. It also is designed for the career junior high school teacher who desires a Master of Science degree in Curriculum and Instruction.

Applicants for Track II must have an entrance conference with the adviser. The adviser may recommend a qualifying examination or prerequisite course work depending upon the background of the applicant. The program, planned with and approved by the adviser, must have a minimum of one-half of the credits to be earned in 600 level courses. In Plan A or B, ED 614 or ED 615 must be taken within the first 15 Cr. of graduate study.

Plan A, 48 Cr.; Plan B, 51 Cr.; Plan C, 54 Cr.

- I. Research: Min., Plan A, 12 Cr.; Plan B, 6 Cr.; Plan C, 3 Cr.
Select from the following as needed:
 PSY 678 Introduction to Graduate Statistics, 3 Cr. (Required Plan B)
 ED 614 Interpretation of Research, 3 Cr.
 ED 615 Introduction to Research, 3 Cr. (Required Plan A)
 ED 653 Current Instructional Research, 3 Cr.
 ED 673 Reading: Investigation of Research and Interpretation of Design, 3 Cr.
 ED 699 Thesis, 9 Cr. (Required Plan A)
- II. Major: Min., Plan A, 33 Cr.; Plan B, 36 Cr.; Plan C, 45 Cr.
A. Prescribed:
 ED 624 Junior High School Theories and Practices, 3 Cr.
 OR
 ED 626 Philosophy and Organization of Middle School, 3 Cr.
 ED 627 Education of the Emerging Adolescent, 3 Cr.
 OR
 PSY 670 Developmental Psychology, 3 Cr.
 ED 625 Junior High School Seminar, 3 Cr.
- B. Professional Education: Min., Plans A and B, 9 Cr.; Plan C, 6 Cr.
Elect, with adviser's approval, appropriate courses from the Professional Education Core.
- C. Teaching Field: Min., Plans A and C, 15 Cr.; Plan B, 18 Cr.
Elect, with adviser's approval, appropriate courses in candidate's teaching field(s).
- D. Educational Applications and Implementations: Min., Plan C only, 15 Cr.
- III. Electives: Min., Plan A, 3 Cr.; Plan B, 9 Cr.; Plan C, 6 Cr.

Track III: Senior High School Education

Applicants for Track III must have an entrance conference with the adviser. The adviser may recommend a qualifying examination or prerequisite course work depending upon the background of the applicant. The program, planned with and approved by the adviser, must have a minimum of one-half of the credits to be earned in 600 level courses. In Plans A or B, ED 614 or ED 615 must be taken within the first 15 Cr. of graduate study.

Plan A, 48 Cr.; Plan B, 51 Cr.; Plan C, 54 Cr.

- I. Research: Min., Plan A, 12 Cr.; Plan B, 6 Cr.; Plan C, 3 Cr.
Select from the following as needed:
 PSY 678 Introduction to Graduate Statistics, 3 Cr. (Required Plan B)
 ED 614 Interpretation of Research, 3 Cr.
 ED 615 Introduction to Research, 3 Cr. (Required Plan A)
 ED 653 Current Instructional Research, 3 Cr.
 ED 673 Reading: Investigation of Research and Interpretation of Design, 3 Cr.
 ED 699 Thesis, 9 Cr. (Required Plan A)
- II. Major: Min., Plan A, 33 Cr.; Plan B, 36 Cr.; Plan C, 45 Cr.
A. Prescribed:
 ED 631 Senior High School Theories and Practices, 3 Cr.
 ED 605 The Adolescent and the School, 3 Cr.
 ED 632 Senior High School Seminar, 3 Cr.
- B. Professional Education: Min., Plans A and B, 9 Cr.; Plan C, 6 Cr.
Elect, with adviser's approval, appropriate courses from the Professional Education Core.
- C. Teaching Field: Min., Plans A and C, 15 Cr.; Plan B, 18 Cr.
Elect, with adviser's approval, appropriate courses in candidate's teaching field. Approved teaching fields include art education, biological sciences, business education, English, health education, industrial education, language arts, mathematics, music, physical sciences, physical education, social studies, speech communication.
- D. Educational Applications and Implementations: Min., Plan C only, 15 Cr.
- III. Electives: Min., Plan A, 3 Cr.; Plan B, 9 Cr.; Plan C, 6 Cr.

Track IV: Reading Teacher Education

This track is designed for teachers who desire a Master of Science degree in Curriculum and Instruction and licensure as a reading teacher. (Teachers desiring licensure as a Reading Consultant should refer to the Master of Science/Reading Consultant program.) To be recommended for licensure as an elementary or secondary remedial reading teacher or as a secondary developmental reading teacher, the candidate must: (a) have an elementary or secondary teaching license based upon a bachelor's degree (elementary teachers may apply for either elementary or secondary reading teacher licensure; secondary teachers may apply only for secondary reading teacher licensure); (b) prove two years of successful teaching experience; and

(c) complete at least one course in each of the following areas, some of which may have been a part of a bachelor's degree program.

1. Adolescent Literature (for secondary developmental reading teacher licensure)
2. Elementary Developmental Reading
3. Secondary Developmental Reading (for secondary developmental and remedial reading teacher licensure)
4. Individual Mental Testing or The Use and Interpretation of Mental Tests
5. Diagnosis and Correction of Reading Difficulties
6. Practicum in Analysis of Reading Difficulties
7. Practicum in Correction of Reading Difficulties

Plan A, 48 Cr.; Plan B, 51 Cr.; Plan C, 54 Cr.

- I. Research: Min., Plan A, 12 Cr.; Plan B, 6 Cr.; Plan C, 3 Cr.
Select from the following as needed:
 - PSY 678 Introduction to Graduate Statistics, 3 Cr. (Required Plan B)
 - ED 614 Interpretation of Research, 3 Cr.
 - ED 615 Introduction to Research, 3 Cr. (Required Plan A)
 - ED 653 Current Instructional Research, 3 Cr.
 - ED 699 Thesis, 9 Cr. (Required Plan A)
- II. Major: Min., Plan A, 33 Cr.; Plan B, 36 Cr.; Plan C, 45 Cr.
 - A. Prescribed:
 - ED 620 Seminar: Introduction to Graduate Studies in Elementary Education, 3 Cr.
OR
 - ED 624 Junior High School Theories and Practices, 3 Cr.
OR
 - ED 626 Philosophy and Organization of Middle School, 3 Cr.
OR
 - ED 631 Senior High School Theories and Practices, 3 Cr.
 - ED 671 Reading: Clinical Diagnosis of Disabilities, 3 Cr.
 - ED 672 Reading: Clinical Remediation of Disabilities, 3 Cr.
 - B. Professional Education: Min., Plans A and B, 9 Cr.; Plan C, 6 Cr.
Elect, with adviser's approval, appropriate courses from the Professional Education Core.
 - C. Teaching Field: Min., Plans A and C, 15 Cr.; Plan B, 18 Cr. Elect, with adviser's approval, appropriate courses in reading.
 - D. Educational Applications and Implementations: Min., Plan C only, 15 Cr.
- III. Electives: Min., Plan A, 3 Cr.; Plan B, 9 Cr.; Plan C, 6 Cr.

MASTER OF SCIENCE—Reading Consultant

A graduate student who wishes to become licensed as a reading coordinator, consultant, or supervisor must have completed a master's degree and three years of successful teaching experience, including one year as a reading teacher.

Two options are provided in the Master of Science-Reading Consultant degree program. By following Track I the graduate student works toward LD licensure. Track II provides for more flexibility in the student's program.

Three starred papers or a thesis will be written during the Master's degree program. Courses in which starred papers will be written must be determined and marked with an asterisk when the graduate student's program is approved. An oral comprehensive examination will be given during the last quarter of the student's work.

Both Plan A (thesis) and Plan B (three starred papers) are available to students who enroll in this program. A total of 48 credits is required on both Plan A and Plan B.

Students pursuing a master's degree must earn at least one-half of the program in courses in which enrollment is limited to graduate students.

An applicant for admission to this program must have met the following requirements:

1. The student must hold or be eligible for a Minnesota Elementary or Secondary School Teacher's License (Certificate).
2. The student must have taken a course in developmental reading at the elementary school level (ED 371, 372, or equivalent).
3. The student must have taken a course in children's or adolescent literature (ENGL 353, ED 340, or equivalent).
4. In following Track I, the student must have training in the teaching of mathematics (ED 445 or equivalent), and SPED 403.

Program completion requires attendance during both the summer and the evening program of the regular academic year.

Plan A or B, 48 Cr.

I. Research: Min., Plan A, 9 Cr.; Plan B, 6 Cr.

Prescribed:

- ED 615 Introduction to Research, 3 Cr. (Plan B only)
- PSY 678 Introduction to Graduate Statistics, 3 Cr.
- ED 699 Thesis, 6 Cr. (Plan A only)

II. Major: Min., Plan A, 21 Cr.; Plan B, 24 Cr.

Prescribed:

- ED 571 Reading: Analysis and Correction of Disabilities in the Classroom, 3 Cr.
- ED 572 Reading in the Secondary School: Developmental Programs, 3 Cr.
- SPED 525 Special Learning Disabilities I, 3 Cr. (Track I only)
- SPED 601 Current Trends in Special Education, 3 Cr. (Track II only)
- ED 671 Reading: Clinical Diagnosis of Disabilities, 3 Cr.
- ED 672 Reading: Clinical Remediation of Disabilities, 3 Cr.
- ED 673 Reading: Investigation of Research and Interpretation of Design, 3 Cr. (Plan B only)
- ED 674 Reading: Administration and Supervision, 3 Cr.
- PSY 593 Individual Appraisal, 3 Cr.
 - or
- PSY 686 Binet, 3 Cr.
 - or
- PSY 687 Wechsler, 3 Cr.

III. Professional Education: Min., 18 Cr. A student must choose either Track I or Track II.

Track I

- SPED 504 Cultural Diversity and Education, 3 Cr.
- SPED 505 Behavior Problems in the School, 3 Cr.
- SPED 526 Special Learning Disabilities II, 3 Cr. (Prereq.: SPED 525)
- SPED 652 Practicum in Special Learning Disabilities, 3 Cr.
- *SPED 612 Psycholinguistics, 3 Cr.
- *PSY 670 Developmental Psychology, 3 Cr.
 - or
- *PSY 596 Psychology of Exceptional Children, 3 Cr.

Track II

- ED 642 Elementary School Language Arts, 3 Cr. or alternative with consent of adviser.
- Electives: 15 Cr., consent of adviser.
 - (a) maximum of 4 credits independent study.
 - (b) minimum of 11 credits in 600 level courses.

*These courses should be taken prior to registration for ED 671 or any of the practicums.

EDUCATION COURSES (ED)

Courses taught by the Teacher Development Department have an ED prefix and replace former Elementary Education (ELED), Secondary Education (SEED), and Student Teaching (EDT) prefixes. The following numbering system describes the grouping of courses:

- ___02 to ___39 *Foundations of Education*—Includes study of: appropriate aspects of those behavioral sciences which support the educational process; needs of students; roles of professional educators; and roles of the schools.
- ___40 to ___59 *Curriculum and Instruction*—Development of scope and sequence of learning activities including process and procedures of teaching.
- ___60 to ___69 *Teaching*—Supervised practica in field settings and supervision courses.
- ___70 to ___89 *Reading*—Materials and methods of reading instruction.

___ 01 and	
___ 90 to ___ 94	<i>Selected Topics</i> New course development.
___ 95 to ___ 95	<i>Workshops</i> —Selected topics.
___ 96 to ___ 98	<i>Open</i> —Permanent workshops or department development.
___ 99 to ___ 99	Independent study or thesis.

The course prefixes and numbers listed below were effective September 1, 1980.

EDUCATION (ED) PERMANENT WORKSHOP COURSE DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to page 27 to determine the maximum number of workshop credits which may be applied to graduate degrees.

552. Workshop: Education of the Gifted and Talented. Definition of giftedness, identification of the gifted, characteristics of the gifted, development and organization of the curriculum for high potential students. 3 Cr. DEMAND.

593. Workshop: Experiential Science Curriculum for Elementary Teachers. Elementary science curriculum analysis and construction to involve hands-on materials and Piagetian Learning Cycle strategies. Students will design, construct, and share portions of units and activities through cooperative group structures. 3 Cr. DEMAND.

594. Workshop: Aerospace Curriculum and Materials, K-12. Designed to prepare teachers to identify, select, develop, implement and evaluate curriculum materials regarding aerospace topics. Primary emphasis will be on access to and use of NASA or NASA-related materials available at or through the Teacher Resource Room at LRC. 1 Cr. DEMAND.

596. Workshop: Middle School Organizational Procedures. An awareness workshop designed to acquaint participants with the philosophy, organizational procedures and other essential components of effective middle schools. Credits will vary depending upon the background and needs of the participants. May be repeated to a max. of 9 Cr. 1-3 Cr. DEMAND.

597. Workshop: Aerospace Activities for the Elementary School. For elementary teachers emphasizing hands-on activity approaches to teaching aerospace concepts. Offered in conjunction with NASA, the MN Department of Transportation, and the U.S. Air Force/Civil Air Patrol. Topics will include rocketry, the shuttle, airplane flight principles, telemetry, human space flight, planetary exploration, energy, and development of curriculum units for teaching the topics. 3 Cr. SUM.

598. Workshop: Defining Basics and Competencies. A critical look at the Back-to-the-Basics and Competency-Based movements. Essential skills, minimum standards, competency-based education and national and state assessment will be reviewed. Identification and evaluation of fundamentals for all students. 1 Cr. SUM.

693. Workshop: Peer Coaching. Staff development based on teachers helping peers through classroom observation and feedback. Includes peer coaching, classroom observation and data collection, pre- and post-observation conferences and guided practice. 1-3 Cr. DEMAND.

COURSE DESCRIPTIONS

549. Multicultural Teaching: Viewpoints, Rationale, Strategies. Examines viewpoints on multicultural teaching from historical, national, and current global perspectives. Presents models for curricular change to meet accreditation standards in public schools. Focuses on implementation strategies. 3 Cr. F ODD NUMBERED YEARS.

550. Nonverbal Communication and Education. The role of nonverbal communication in human interaction. Includes analysis of environmental factors, physical appearance, body language, touching behavior, and paralanguage. 3 Cr. DEMAND.

571. Reading: Analysis and Correction of Disabilities in the Classroom. Causes of reading difficulties, procedures to diagnose and correct them. Prereq.: a course in developmental reading. 3 Cr. S EVEN NUMBERED YEARS.

572. Reading in the Secondary School: Developmental Programs. Nature of high school reading program, development of reading techniques and skills, development of vocabulary, and reading ability in content fields. 3 Cr. W.

573. Reading and Children's Literature: Current Issues. Examine children's books in terms of the development of cognitive and affective dimensions in reading comprehension. Relates the literature program in the curriculum to the aims of reading instruction, particularly in collaterally strengthening functional and recreational reading habits, not an alternative to IM 481 or 639. 4 Cr. S.

575. Reading: Materials for Classroom Use. An intensive study of materials used in teaching reading. All age groups are considered. Prereq.: ED 371 or 372. 3 Cr. DEMAND.

COURSES FOR GRADUATE STUDENTS ONLY

601. Selected Topics in Education:_____. Course designed for intensive study of a special topic in education. Topic will be announced in the class schedule. 1-4 Cr. May be repeated to max. of 9 Cr. DEMAND.

602. Evaluation in Education. A study of evaluation models utilized in education and the application of those models. Topics such as accreditation and the evaluation of staff, learners, textbooks, materials, programs, facilities, instruction, curricula, etc. are considered. A review of guidelines and standards for evaluators is presented. 3 Cr. F.

604. School/Community Organizations and the Teacher. Introductory guide to planned actions for facilitating human responsiveness and adaptability in school organizations. 3 Cr. DEMAND.

605. The Adolescent and the School. Importance of the school cultural milieu on the development of students. Emphasis on role of school personnel in developing, implementing constructive learning environments. 3 Cr. DEMAND.

606. Problems in American Education. Issues arising in our American educational situation; organizing principles of education in a democracy; the school and the state; education and social reconstruction; public schools and religious education; academic freedom; teaching controversial issues. 3 Cr. DEMAND.

607. The Student, The Teacher, and The Law. Statutes and legal decisions affecting teachers and students in the public schools of the United States. Licensure, contracts, tenure, teacher authority and liability with respect to students, curriculum, school property, and other related topics will be studied. 3 Cr. DEMAND.

608. Children's/Students' Rights. An analysis of problems related to the oppression of young people/students. 2 Cr. DEMAND.

609. Comparative Education. Foundations, practices, and problems of European, Asiatic, and American school systems. 3 Cr. DEMAND.

610. The School and the Social Order. Importance of education in the social structure, effects of a culture on education, the interrelationships of education and the economic, social and political systems; comparative education. 3 Cr. DEMAND.

611. History of American Education. The development of education in the United States from the Colonial period to the present. 3 Cr. DEMAND.

612. Philosophy of Education. Historical aspects of education theory; beliefs, arguments, and assumptions underlying current educational thought and practice. 3 Cr. DEMAND.

614. Interpretation of Research. Documentation and bibliography; kinds of research and research methods; use and interpretation of basic statistical tools and procedures. 3 Cr. DEMAND.

615. Introduction to Research. Evaluating research procedures and interpreting findings. Defining and delimiting a problem, efficient gathering and proper documentation of data, organization and presentation of findings in acceptable form. 3 Cr. DEMAND.

620. Seminar: Introduction to Graduate Studies in Elementary Education. A student/staff seminar designed to orient the student to the graduate program in elementary education. 3 Cr. DEMAND.

622. Seminar in Elementary Education. 1-4 Cr. DEMAND.

623. Elementary Education: Contemporary and Future. Problems, conditions, and issues relating to elementary education. Analysis and study of organization, instructional practices, curriculum, and materials. 3 Cr. DEMAND.

624. Schools for the Early Adolescent. Specific information and skills relative to the field of *early adolescent* education, including appropriate functions and components; philosophy and development; study of the current theories and practices in the education of early adolescents. 3 Cr. DEMAND.

625. Seminar in Early Adolescent Education. Problems and issues related to teaching and learning in the modern middle or junior high school; areas of emphasis determined by the needs and interests of the members of the seminar. Prereq.: 624. 3 Cr. DEMAND.

627. Education of the Emerging Adolescent. This course focuses on the needs, the nature and the characteristics of the transescent learner. Emphasis will be on the organizational and instructional procedures for the school necessary to accommodate the needs and characteristics of students in the middle grades (ages 10-14). 3 Cr. DEMAND.

628. Modern Trends in Secondary Education. Various kinds of new educational materials, programs and equipment; speakers, visitations, and observation. 3 Cr. DEMAND.

631. Senior High School Theories and Practices. Historical overview of the field of senior high school education, including a survey of functions, philosophy, and development; study of current theories and practices in secondary education. 3 Cr. DEMAND.

632. Senior High School Seminar. Problems and issues related to effective teaching and learning in the modern senior high school; areas of emphasis determined by needs and interests of the members of the seminar. Prereq.: 631. 3 Cr. DEMAND.

635. Teaching Listening Skills in the Elementary/Secondary School. An examination/exploration of methods and materials for teaching listening skills in the elementary and

secondary school classroom. 3 Cr. DEMAND.

640. The Classroom Teacher and Mainstreaming. Surveys mainstreaming from the perspective of the classroom teacher. Emphasizes developing and implementing IEP/IIP and an overview of handicapping conditions. 3 Cr. DEMAND.

641. Elementary School Science. Activities and procedures for improving instruction in science. Analysis and evaluation of literature, research findings, and curriculum materials in the science curriculum. 3 Cr. DEMAND.

642. Elementary School Language Arts. Activities and procedures for improving instruction in the language arts. Analysis and evaluation of literature, research findings, and curriculum materials in the language arts. 3 Cr. DEMAND.

643. Elementary School Social Studies. Activities and procedures for improving instruction in the social studies. Analysis and evaluation of literature, research findings, and curriculum materials in the social studies curriculum. 3 Cr. DEMAND.

644. Elementary School Mathematics. Activities and procedures for improving instruction in mathematics. Analysis and evaluation of literature, research findings, and curriculum materials in the mathematics curriculum. 3 Cr. DEMAND.

645. School Discipline. Exploring behavior in the classroom environment. Helping teachers to develop school environments which promote effective functioning. 3 Cr. DEMAND.

646. Elementary School Curriculum and Instruction. Theory and practice of elementary school curriculum and instruction. 3 Cr. W, SUM.

647. Secondary School Curriculum. Historical development; current issues and trends; sociological and psychological foundations, theories of secondary school education; organization; programs and procedures of curriculum improvement stressing role of teacher. 3 Cr. DEMAND.

648. Curriculum Construction. The basic study of alternative techniques and approaches to curriculum construction and implementation at all instructional levels. 3 Cr. DEMAND.

649. Practicum in Curriculum Construction and Development. Actual work with a school system to (1) survey the needs of the community, (2) study the present curriculum in the school, and (3) suggest changes. 3 Cr. DEMAND.

650. Law-Related Education: Materials and Instructional Strategies. Integration of law and legal concepts in elementary and secondary school curricula. Primary emphasis on rationale, materials of instruction, and teaching strategies as well as substantive education in law. 3 Cr. DEMAND.

651. Kindergarten Education. Activities and procedures for teaching and the use of materials in kindergarten programs. 3 Cr. DEMAND.

652. Learning Centers in the Elementary Classroom. Learning centers, design and management. Explores the learning environment, requires building five learning centers, and designing a management system for their use. 3 Cr. DEMAND.

653. Current Instructional Research. A review and appraisal of research study findings in all instructional areas. Educational implications of the research. 3 Cr. DEMAND.

654. Strategies, Development and Evaluation of Instruction. Investigation, application, analysis and evaluation of recent developments in instruction. Includes effective instruction, differentiated supervision, peer evaluation, and student participation. 3 Cr. W.

655. Teaching Strategies for Practitioners. Study and development of materials and teaching techniques in meeting the needs of classroom teachers at the post-baccalaureate level. 3 Cr. DEMAND.

656. Writing as a Basic Skill in the Elementary School. Writing as a basic skill—explores the process of teaching writing in the elementary school through writing experiences. 3 Cr. DEMAND.

657. Classroom-Computer Curriculum and Methods. An overview for teachers of instructional computer systems in the classroom; methods for use; the selection, design, or construction of computer-based curriculum; computer-based evaluation; and related research findings. 3 Cr. DEMAND.

658. Implementing Curriculum/Instructional Models by Computer. This course utilizes curricular/instructional models as a base. The student develops computer coursework that implements a model. Prereq.: 657 or competence in BASIC computer language. 3 Cr. DEMAND.

659. Critical Thinking: Theory Into Practice. An analysis of critical thinking and current brain theory. The theoretical framework provides the basis for the creation of learning experiences designed to cultivate critical thinking by learners. 3 Cr. DEMAND.

661. Supervision of Student Teachers. Student teaching in professional curriculum; procedures for guiding students in planning, teaching, and evaluating learning activities. Prereq.: two years successful teaching experience. 3 Cr. DEMAND.

668. Introduction to Techniques for Differentiated Supervision. Hunt's theory of conceptual levels, use of effective skills with student teachers, cooperative planning to apply supervision strategies (observing, conferencing) based on the student teacher's conceptual level. Two years teaching experience required. 3 Cr. DEMAND.

669. Advanced Techniques for Differentiated Supervision. Participants will: review theory of Hunt's conceptual levels; practice differentiated supervisory conferences and strategies; use

strategies to improve the conceptual level of their student teachers; review and make a presentation on a module of effective teaching. Prereq.: 668. 3 Cr. DEMAND.

671. Reading: Clinical Diagnosis of Disabilities. Clinical experience in administration and interpretation of techniques in diagnosing reading disabilities. Prereq.: 471-571 and departmental approval. 3 Cr. SUM.

672. Reading: Clinical Remediation of Disabilities. Clinical experience in correction of reading disabilities. Prereq.: 671 and department approval. 3 Cr. SUM.

673. Reading: Investigation of Research and Interpretation of Design. A study of research methods and current research regarding the reading process and reading related areas. 3 Cr. S. ODD NUMBERED YEARS.

674. Reading: Administration and Supervision. Implementation and improvement of reading programs from pre-reading through corrective procedures in high school. 3 Cr. F, EVEN NUMBERED YEARS.

675. Reading: Research in Children's Literature. Survey of research in children's literature for students working on starred papers or theses only. Consent of instructor. 3 Cr. DEMAND.

699. Thesis. 6-9 Cr. F, W, S, SUM.



Technology and Industrial Engineering (TECH)

106 HEADLEY HALL/255-2107

Chairperson: Jane Downey

Graduate faculty: Ryan, Yen

PERMANENT WORKSHOP COURSE DESCRIPTIONS

These courses are not intended to support a graduate degree program but are intended to respond to identified needs of post-baccalaureate students. Please refer to page 27 to determine the maximum number of workshop credits which may be applied to graduate degrees.

529. Workshop: Robotics. Microbot-Teachmover, minimover, and T.S.I. Robot mechanism controls, application, and impact on labor force and society. Interface to Apple computer and Lab-Volt microprocessor. Control systems and applications. 2 Cr. SUM.

575. Workshop: Microprocessing Training System—Lab Volt—AA348. A study, analysis and application of the Lab Volt AA348 microcomputer laboratory system as applied to high school industrial arts electronics classes and vocational electronics programs. Illustrating the input/output operations, special programming methods of the system, trouble shooting, and applications. 4 Cr. SUM.

578. Digital Electronics. A solid foundation in digital electronic fundamentals will be presented. Topics taught via readings and hands-on lab activities. 4 Cr. SUM.

665. Photographic Educators Workshop. Current aspects of exposure, processing and printing of B/W and color photography. Familiarization with photography as an industrial medium, its uses in business and industry, and career opportunities. Field trips and industrial guest lecturers. 8 Cr. SUM.

COURSE DESCRIPTIONS

571. Consumer Electronics. A study of the circuits and systems employed in popular home entertainment devices such as radio, T.V., and hi-fi. Emphasis will be placed on the set-up, maintenance and troubleshooting of these devices. 4 Cr. DEMAND.

572. Advanced Semiconductor Devices and Applications. In-depth study of digital and linear integrated circuits, compound semiconductors, photo-diodes, LED's, semiconductor laser, liquid crystal, and other state of the art topics. 4 Cr. DEMAND.



Theatre (TH)

210 PERFORMING ARTS CENTER/255-3229

Chairperson: Dale Swanson

Graduate Faculty: Baschky, Cermele, Perrier, Speers

The Department of Theatre does not offer a graduate degree, but the courses listed below are available for graduate credit as supplements to other degree programs or for students with a special interest in theatre but who are not pursuing a degree.

Graduate courses in the Department of Theatre are offered in the daytime schedule and provide a service component to other programs.

COURSE DESCRIPTIONS

542. Stage Lighting. Basic requirements of lighting for the stage. Lab. 4 Cr. F.

544. Internship in Theatre. In-residence training with a cooperating professional theatre. Permission of department required. 4-16 Cr. F, W, S.

546. Advanced Theatre Practicum. Lab. course for advanced theatre majors allowing implementation of creative problems in acting, directing, design and other theatre areas. Prereq.: permission of staff. 1 Cr. F, W, S.

548. Acting II. Analyzing and creating a stage character. Prereq.: 253. 4 Cr. W.

549. Directing II. Advanced directing techniques. Prereq.: 349. 4 Cr. W.

558. Acting III. Concentration on period styles. 4 Cr. S.

559. Directing III. Continuation of Directing II. 4 Cr. S.

560. Theatre Promotion and Business Management. Principles and methods of management in educational, community and professional theatres. Emphasis on promotion, ticket office procedure and theatre administration. 4 Cr. DEMAND.

581. Theatre History I. A chronological survey of the various arts and crafts of the theatre from the earliest origins to the mid-nineteenth century. 4 Cr. W.

582. Theatre History II. A chronological survey of the various arts and crafts of the theatre from the mid-nineteenth century to the present day. Prereq.: 581. 4 Cr. S.

591. Drama I. World drama; its origins to early English Renaissance. 4 Cr. F.

592. Drama II. World drama; from English Renaissance to early twentieth century. Prereq.: 591. 4 Cr. W.

593. Drama III. World drama; twentieth century. Prereq.: 591. 4 Cr. S.

596. Summer Theatre. Theatre production for advanced students. Experience in acting, directing, costuming, construction, promotion, lighting and other disciplines during the summer season. Registration by application only. 1-8 Cr. SUM.

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Donald Sikkink, Dean, College of Fine Arts and Humanities
Dorothy Simpson, Vice President for University Relations
David Sprague, Vice President for Student Life and Development
Stephen Weber, Vice President for Academic Affairs

GRADUATE FACULTY

Abartis, Caesarea E. (1977)

Associate Professor of English
A.B. 1967, Duquesne University; M.A. 1969,
Ph.D. 1977, Southern Illinois University

Addicott, James T. (1968)

Assistant Professor of Geography
B.S. 1959, North Dakota State University;
B.S. 1966, Moorhead State University; M.A.
1968, University of Kentucky; D.A. 1983,
University of Northern Colorado

Agneberg, Craig (1985)

Assistant Professor of Business Education
and Office Administration
B.S. 1977, M.A. 1978, University of North
Dakota; Ed.D. 1985, University of Nebraska

Aiken, Joseph G. (1969)

Professor of Art
B.A. 1963, M.F.A. 1968, University of Wash-
ington

Alessio, John (1984)

Assistant Professor of Sociology and Anthropology

B.A. 1970, Loyola University; M.A. 1973, Eastern Illinois University; Ph.D. 1981, Southern Illinois University

Alhelm, Frank A. (1966)

Professor of Art

B.A. 1949, M.A. 1963, University of Northern Iowa; Ed.D. 1973, University of New Mexico

Ames, Kenneth A. (1974)

Professor; Dean, College of Education

B.S. 1953, University of Wisconsin—River Falls; M.A. 1961, University of Minnesota; Ed.D. 1965, University of Wyoming

Anderson, Derwyn L. (1968)

Associate Professor of Psychology

B.A. 1965, North Park College; M.A. 1967, Ph.D. 1968, University of North Dakota

Anderson, Garry G. (1971)

Professor of Earth Sciences

B.A. 1962, University of Northern Iowa; M.A.T. 1967, M.A. 1969, Ph.D. 1971, Indiana University

Anderson, James B. (1966)

Professor of English; Director, Religious Studies

B.A. 1958, M.A. 1961, Southern Illinois University; Ph.D. 1977, University of Iowa

Anderson, Myron G. (1965)

Professor of Philosophy

B.A. 1951, M.A. 1954, University of Minnesota; Ph.D. 1959, Brown University

Andrzejewski, Julie R. (1971)

Professor; Director, Human Relations and Multicultural Education

B.A. 1969, M.A. 1971, University of Washington; Ed.D. 1978, University of Northern Colorado

Arndts, Russell T. (1959-1963, 1968)

Professor of Chemistry

B.S. 1957, Bemidji State University; M.S. 1960, North Dakota State University; Ph.D. 1969, Louisiana State University

Ayers, Floyd W. (1969)

Professor of Special Education

B.A. 1955, Cornell University; M.A. 1956, Syracuse University; Ph.D. 1968, University of Minnesota

Baer, Roger K. (1972)

Professor of Sociology and Anthropology

B.S. 1951, American University; M.A. 1956, Catholic University; Ph.D. 1970, University of Chicago

Bahauddin, Mohammed (1970)

Professor of Mathematics and Statistics

B.S. 1953, Osmania University (India); M.S. 1957, Karachi University (Pakistan); M.S. 1965, University of Minnesota; Ph.D. 1969, New Mexico State University

Banaian, King (1984)

Assistant Professor of Economics

B.A. 1979, St. Anselm College; M.A. 1984, Ph.D. 1986, Claremont Graduate School

Baschky, Richard (1958-1960, 1969)

Assistant Professor of Theatre

B.A. 1954, San Diego State University; M.F.A. 1958, State University of Iowa

Bates, William B. (1972)

Associate Professor; Counseling Services

B.S. 1963, College of Steubenville; M.Ed. 1964, University of Virginia; Ph.D. 1974, Kent State University

Bavery, Edgar A. (1968)

Professor of Teacher Development

B.S. 1953, M.S. 1954, Western Illinois State University; Ed.D. 1968, University of Northern Colorado

Bayne, Robert D. (1971)

Professor; Director, Counseling Services

B.S. 1963, M.A. 1967, Eastern Michigan University; Ph.D. 1971, Kent State University

Becker, Robert W. (1963)

Professor of Political Science; Special Assistant to the President

B.A. 1959, Hamline University; M.A. 1963, Michigan State University; J.D. 1975, William Mitchell College of Law

Benson, Robert G. (1958)

Professor of Marketing and General Business; Chairperson

B.S. 1951, M.A. 1956, St. Cloud State University; Ph.D. 1966, University of Iowa

Bergstrom, Philip G. (1969)

Professor of Industrial Studies

B.A. 1960, B.A., 1962, M.A. 1963, Central Washington State College; Ed.D. 1969, Washington State University

Berling, John G. (1968-1969, 1975)

Professor; Dean, Learning Resources; Director, Center for Information Media

B.S. 1957, St. Cloud State University; M.S. 1967, Wayne State University; Ph.D. 1975, University of Nebraska

Bigler, Joan K. (1978)

Associate Professor of Special Education

B.S. 1963, M.A. 1967, University of Minnesota; Ph.D. 1979, University of Illinois

Bineham, Jeffery L. (1986)

Assistant Professor of Speech Communication
B.A. 1980, George Fox College; M.A. 1983,
Ph.D. 1986, Purdue University

Bird, Howard A. (1966)

Professor of Mathematics and Statistics
B.S. 1959, Minot State College; M.S. 1965,
University of North Dakota; Ph.D. 1974,
Kansas State University

Bixby, Robert O. (1980)

Assistant Professor of Geography
B.A. 1973, M.A. 1975, Ph.D. 1985, University
of Minnesota

Bjorklun, Eugene C. (1967)

Professor of Teacher Development
B.S. 1956, M.A. 1963, Ed.D. 1967, University
of Nebraska

Bjorklund, Lorimer R. (1969)

Professor of Industrial Studies
B.A. 1959, University of Northern Iowa; M.S.
1967, Mankato State University; Ph.D. 1979,
Ohio State University

Boyer, David L. (1976)

Associate Professor of Philosophy
B.A. 1968, Yale University; M.A. 1970, Pacific
Lutheran University; Ph.D. 1976, Boston
University

Breci, Michael G. (1986)

Assistant Professor of Sociology and Anthro-
pology
B.A. 1973, Sioux Falls College; M.S. 1981,
South Dakota State University; Ph.D. 1986,
Iowa State University

Brennan, Nancy J. (1978)

Associate Professor of Social Work; Chair-
person
B.A. 1965, M.S.W. 1967, Ph.D. 1976, Univer-
sity of Minnesota

Brink, Allen L. (1959)

Professor of Mathematics and Statistics
B.A. 1952, Concordia College; M.Ed. 1956,
University of North Dakota; M.S. 1959, Uni-
versity of Illinois; Ed.D. 1969, University of
Northern Colorado

Brink, Carol (1972)

Assistant Professor of Physical Education and
Recreation; Chairperson
B.S. 1961, M.A. 1965, Ph.D. 1987, University
of Minnesota

Brown, David R. (1965)

Professor of Art
B.A. 1957, M.F.A. 1959, Indiana University

Buchanan, Mark A. (1978)

Associate Professor of Marketing and General
Business
B.A. 1975, College of St. Thomas; J.D. 1978,
University of Nebraska

Buckley, Chester W. (1966)

Professor of Physical Education and Recreation
B.S. 1953, South Dakota State University;
M.S. 1956, University of Northern Colorado;
D.P.E. 1967, Springfield College

Buhl, Anthony J. (1979)

Associate Professor of Psychology
B.S. 1963, M.S. 1967, St. Cloud State Univer-
sity; Ph.D. 1970, Oregon State University

Buls, Gary D. (1984)

Assistant Professor of Mathematics and Statis-
tics
B.A. 1979, Luther College; M.S. 1981, Ph.D.
1986, Iowa State University

Burnes, Bruce B. (1967)

Professor of Management and Finance
B.B.A. 1950, M.B.A. 1953, Ph.D. 1972, Uni-
versity of Minnesota

Cahill, Paul E. (1985)

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sity; Ph.D. 1983, University of Oregon

Calhoun, Robert J. (1970)

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Business
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Carlson, Kent F. (1962-1964, 1967)

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B.S. 1960, University of North Dakota; M.A.
1962, Washington State University; Ph.D.
1967, Montana State University

Carlson, Ronald E. (1973)

Professor of Accounting
B.S. 1964, Augustana College; M.B.A. 1966,
Ph.D. 1973, University of Wisconsin

Carpenter, John H. (1968)

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B.A. 1951, Macalester College; M.S. 1953,
Ph.D. 1955, Purdue University

Carr, David L. (1986)

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B.A. 1967, M.A. 1969, San Diego State; Ph.D.
1975, SUNY-Binghamton

Carr, Ralph W. (1977)

Associate Professor of Computer Science;
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B.A. 1968, Carleton College; Ph.D. 1977,
University of Wisconsin

Carson, Jane (1986)

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Carter, P. John (1970)

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B.S. 1958, Winona State University; M.A. 1965, Western Michigan University; Ed.D. 1970, University of Northern Colorado

Cermele, D. J. (1968)

Professor of Theatre

B.A. 1957, Antioch College; M.F.A. 1959, Boston University; Ph.D. 1977, University of Minnesota

Clapp, Thomas W. (1967)

Professor of Biological Sciences

B.S. 1962, Murray State University; M.S. 1964, North Dakota State University; Ph.D. 1968, Texas A&M University

Coard, Robert L. (1960)

Professor of English

B.A. 1943, Quincy College; M.A. 1946, Ph.D. 1952, University of Illinois

Coen, Rena N. (1969)

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B.A. 1946, Barnard College; M.A. 1948, Yale University; Ph.D. 1969, University of Minnesota

Cohn, Sheree L. (1985)

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B.S. 1965, Tusculum College; M.S. 1967, University of Tennessee; Ed.D. 1972, Louisiana State University

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Cooper, Mehroo (1983)

Assistant Professor of Chemistry

B.S. 1954, M.S. 1956, Osmania University (India); Ph.D. 1961, Basel University (Switzerland)

Coppock, Henry A. (1972)

Professor of Geography

B.S. 1964, St. Cloud State University; M.A. 1966, Ph.D. 1970, Michigan State University

Corliss, Richard L. (1966)

Professor of Philosophy

B.A. 1954, Taylor University; B.D. 1957, Northern Baptist Seminary; M.A. 1959, Ph.D. 1968, University of Illinois

Cronn, John C. (1976)

Professor of Biological Sciences

B.S. 1963, Iowa State University of Science and Technology; M.S. 1972, Ph.D. 1974, University of Nebraska

Crow, Stephen M. (1986)

Assistant Professor of English

M.A. 1971, Louisiana State University; M.A. 1973, Bowling Green State University; Ph.D. 1986, University of Michigan

Dalton, Bill J. (1983)

Associate Professor of Physics, Astronomy and Engineering Science

B.S. 1963, M.S. 1966, Ph.D. 1970, Florida State University

DeGroote, David K. (1985)

Assistant Professor of Biological Sciences

B.S. 1971, M.S. 1975, Ph.D. 1980, University of Iowa

Dendinger, Richard D. (1965)

Professor of Chemistry

B.S. 1958, Minot State College; M.S. 1966, North Dakota State University; Ph.D. 1974, South Dakota State University

DeSanto, R. John (1972)

Professor of Mass Communications

B.S. 1957, M.A. 1959, University of Minnesota—Duluth; Ed.D. 1971, University of Northern Colorado

Devine, Philip E. (1984)

Assistant Professor of Philosophy

B.A. 1966, Yale University; Ph.D. 1971, University of California—Berkeley

Dienhart, John W. (1979)

Associate Professor of Philosophy; Chairperson

B.A. 1972, Roosevelt University, M.A. 1976, Ph.D. 1979, University of Illinois—Urbana

Dill, Gary A. (1987)

Assistant Professor of Educational Administration and Leadership

B.S. 1969, Houston Baptist University; D.Min. 1975, Princeton Theological Seminary; D.Min. 1975, Southern Baptist Theological Seminary

Dillman, Richard H. (1978)

Associate Professor of English

B.A. 1965, University of Connecticut; M.A. 1972, Southern Connecticut State College; Ph.D. 1978, University of Oregon

Dobey, Rodney G. (1973)

Professor of Health Education and Traffic Safety

B.S. 1971, M.S. 1972, Southern Illinois University; Ph.D. 1980, University of Southern Illinois—Carbondale

Downes, Alan J. (1969)

Professor of Interdisciplinary Studies

B.A. 1953, M.A. 1955, Florida State University; Ph.D. 1961, University of Washington

Dunfee, Richard (1985)

Director, Sponsored Programs

B.A. 1971, M.A. 1973, Marshall University; Ph.D. 1980, Ohio State University

Dwyer, Mary A. (1974)

Professor of Psychology

B.S. 1942, Trenton State College; M.Ed. 1958, Rutgers University; Ed.D. 1972, Teachers College, Columbia University

Earles, Robert W. (1969)

Professor of Mathematics and Statistics

B.S. 1960, M.S. 1963, Illinois State University; M.S. 1968, Rutgers University; Ed.D. 1969, University of Northern Colorado

Eastby, John H. (1983)

Assistant Professor of Political Science

B.A. 1975, Augustana College; M.A. 1978, Ph.D. 1984, University of Virginia

Echols, Charles L. (1972)

Professor of Music

B.M. 1959, B.A. 1959, Belhaven College; M.M. 1961, University of Texas; D.M.A. 1969, University of Southern California

Eckroth, Charles A. (1969)

Professor of Physics, Astronomy and Engineering Science; Chairperson

B.A. 1956, St. John's University; Ph.D. 1966, Iowa State University

Ellingson, William J. (1963)

Professor of Art

B.F.A. 1960, Minneapolis School of Art; M.F.A. 1963, State University of Iowa

Ellis, Bruce W. (1964)

Professor of Physics, Astronomy and Engineering Science

B.A. 1961, Jamestown College; M.S. 1962, University of North Dakota; Ph.D. 1973, University of Minnesota

Ernest, David J. (1963)

Professor of Music

B.M. 1951, Chicago Musical College; M.S. 1955, University of Illinois; Sorbonne, 1958-1969, University of Paris; Ed.D. 1961, University of Colorado

Ernst, Charles I. (1962-1966, 1968)

Professor of Mathematics and Statistics

B.S. 1956, St. Cloud State University; M.A. 1962, University of South Dakota; Ph.D. 1968, Ohio State University

Ezell, Wayland L. (1970)

Professor of Biological Sciences

B.A. 1959, M.A. 1963, University of the Pacific; Ph.D. 1970, Oregon State University

Eyo, Bassey A. (1985)

Assistant Professor of Speech Communication

B.S. 1978, M.A. 1980, University of Wisconsin; Ph.D. 1985, University of Minnesota

Falk, Armand E. (1968)

Professor of English

B.A. 1955, Concordia College; B.S. 1960, University of Minnesota; M.A. 1965, University of Montana; Ph.D. 1968, Michigan State University

Farrell, Crumpton (1978)

Assistant Professor of Management and Finance

B.S. 1944, United States Naval Academy; B.S.E.E. 1948, Massachusetts Institute of Technology; M.A. 1968, M.B.A. 1970, Ph.D. 1975, University of Pennsylvania

Fields, Dennis C. (1971)

Professor of Learning Resources and Center for Information Media

B.S. 1964, M.S.T. 1967, Wisconsin State University-Stevens Point; Ed.D. 1971, East Texas State University

Flom, James H. (1965)

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B.S. 1954, M.A. 1958, Ph.D. 1969, University of Minnesota

Frank, Stephen I. (1978)

Associate Professor of Political Science

B.S.E. 1967, M.A. 1969, Central Michigan University; Ph.D. 1977, Washington State University

Frohrip, Kenton R. (1965)

Professor of Music; Chairperson

B.S. 1960, M.Ed. 1961, South Dakota State University; Ph.D. 1972, University of Minnesota

Fuller, Stephen R. (1975)

Associate Professor of Music

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Gadberry, Eva M. (1975)

Professor of Special Education

B.S. 1968, M.S. 1971, Ph.D. 1977, University of Wisconsin

Gallagher, Daniel J. (1982)

Associate Professor of Economics
B.A. 1964, LaSalle College; M.A. 1967, Ohio University; Ph.D. 1976, University of Maryland

Gambill, Edward L. (1966)

Professor of History
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Garrity, Michael K. (1967)

Professor of Physics, Astronomy and Engineering Science
B.S. 1964, St. John's University; M.S. 1965, Ph.D. 1968, Arizona State University

Gasparotto, Gloria (1984)

Assistant Professor of Psychology
B.A. 1974, Illinois Wesleyan University; M.A. 1976, Ed.S. 1978, Western Michigan University; Ph.D. 1983, West Virginia University

Gembol, Dorothy J. (1985)

Assistant Professor of Counseling and Related Services
B.A. 1972, University of Florida; M.A. 1974, Ph.D. 1981, Kansas State University

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Assistant Professor of Industrial Studies
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Gill, Kathleen A. (1987)

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Gleisner, Richard F. (1968)

Associate Professor of Economics
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Goodrich, Herbert (1964)

Professor of Sociology and Anthropology
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Gorrell, Donna K. (1987)

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B.A. 1972, M.A. 1974, D.A. 1980, Illinois State University

Gower, Calvin W. (1957)

Professor of History; Director, Central Minnesota Historical Center
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Grewe, Alfred H. (1965)

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Grover, Larry L. (1976)

Professor of Computer Science
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Gundersen, Ralph W. (1964)

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Gutteter, Lee J. (1967)

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Gyllstrom, Mabeth S. (1968)

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Habte, Amde M. (1977)

Professor of Mass Communications
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Hagen, Owen A. (1959-1961, 1964)

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Halberg, Laurie L. (1963)

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Hanafy, Abdalla A. (1968)

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Haniff, Ghulam Mohammed (1965)

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Hellwig, David J. (1966)

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Hemmer, Joan D. (1976)

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Hendricks, Robert H. (1979)

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Herbison, Priscilla J. (1974)

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Hibbard, Jack H. (1978)

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Hoffman, Patricia A. (1966)

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B.A. 1945, Carleton College; M.S. 1964, St. Cloud State University; Ph.D. 1982, Union of Experiencing Colleges and Universities

Holden, Donald M. (1975)

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Hopwood, Alfred J. (1962)

Professor of Biological Sciences
B.S. 1956, Ph.D. 1967, Colorado State University

Hornstein, Stephen E. (1987)

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Hortis, Theophanis C. (1975)

Associate Professor of Health Education and Traffic Safety
B.A. 1960, Macalester College; M.P.H. 1971, Ph.D. 1978, University of Minnesota

Horton, Andrew C. (1987)

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B.S. 1981, Oswego State University; M.S. 1982, Eastern Illinois University; Ed.D. 1985, West Virginia University

Hotz, John C. (1983)

Associate Professor of Psychology
B.S. 1970, St. John's University; M.S. 1974, St. Cloud State University; R.H.D. 1982, Southern Illinois University-Carbondale

Jackson, Tommie Lee (1986)

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B.A. 1972, Paine College; M.A. 1973, Ph.D. 1985, University of Nebraska—Lincoln

Jacobson, Joan (1962)

Professor of Communication Disorders
B.A. 1944, Morningside College; M.A. 1948, Ph.D. 1958, Syracuse University

James, Richard E. (1966)

Professor of Chemistry; Chairperson
B.S. 1957, Mayville State Teachers College; M.A. 1966, University of Northern Iowa; M.S. 1974, Ph.D. 1975, Kansas State University

Jazwinski, Christine H. (1978)

Associate Professor of Psychology
M.S. 1973, Warsaw University; Ph.D. 1977, Purdue University

Jensen, Marilyn A. (1981)

Assistant Professor of Psychology; Chairperson
B.A. 1971, Ph.D. 1977, University of Minnesota

Johnson, James C. (1976)

Professor of Marketing and General Business
B.S.B.A. 1966, M.A. 1967, University of Arizona; Ph.D. 1970, University of Minnesota

Johnson, James R. (1965)

Professor of Music
B.A. 1953, St. Olaf College; M.M.Ed. 1958, University of Montana; Ed.D. 1969, University of Illinois

Johnson, James W. (1967)

Professor of Computer Science
B.S. 1963, St. Cloud State University; M.A. 1967, Louisiana State University; Ph.D. 1973, University of Northern Colorado

Johnson, Louise H. (1963)

Professor; Dean, College of Science and Technology
B.A. 1949, Augsburg College; M.A. 1963, University of Illinois; M.A. 1961, Ed.D. 1971, University of Northern Colorado

Johnson, Richard A. (1976)

Associate Professor of Special Education
B.S. 1958, Moorhead State University; M.A. 1965, Ed.D. 1971, University of Minnesota

Johnson, Robert C. (1985)

Associate Professor, Director of Minority Studies
B.A. 1967, Lincoln University; B.S. 1984, M.A.T. 1970, M.A. 1974, Ph.D. 1976, Washington University

Johnson, Robert W. (1974)

Professor of Computer Science
A.B. 1962, Columbia College; M.S. 1965, Ph.D. 1969, City University of New York

Johnson, Vincent A. (1967)

Professor of Biological Sciences
B.S. 1952, M.S. 1955, Ph.D. 1964, University of Nebraska

Jones, Evan M. (1968)

Professor of Political Science
B.A. 1960, Hamline University; M.A. 1969, University of North Dakota; Ph.D. 1976, University of Nebraska

Kalia, Ravindra Nath (1985)

Associate Professor of Mathematics and Statistics
B.S.C. 1959, M.S.C. 1962, 1963, Ph.D. 1972, Lucknow University (India)

Kammermeier, Martin A. (1962-1965, 1968)

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B.S. 1958, M.S. 1963, St. Cloud State University; Ph.D. 1969, University of Minnesota

Karjala, Jeanette A. (1986)

Associate Professor of Business Education and Office Administration
B.A. 1964, M.A. 1974, Western Washington University; Ph.D. 1986, University of North Dakota

Karvel, George R. (1980)

Professor of Management and Finance
B.S. 1969, M.S. 1972, D.B.A. 1979, University of Colorado

Keith, Philip M. (1977)

Professor of English
A.B. 1964, Amherst College; M.A. 1968, Bryn Mawr College; Ph.D. 1971, University of Pennsylvania

Keith, Sandra (1983)

Assistant Professor of Mathematics and Statistics
A.B. 1966, Brown University; M.A., Ph.D. 1971, University of Pennsylvania

Kellerman, Debra K. (1983)

Associate Professor of Business Education and Office Administration
B.S. 1972, M.S. 1975, Bemidji State University; Ph.D. 1981, University of Iowa

Kelly, John M. (1969)

Professor of Physical Education and Recreation; Director, Adult Fitness Program
B.S. 1957, Slippery Rock State College; M.S. 1959, University of Oregon; D.P.E. 1969, Springfield College

Kelsey, Kenneth W. (1970)

Professor of Teacher Development; Chairperson
B.S. 1962, Mankato State University; M.A. 1966, Ph.D. 1974, University of Minnesota

Kendall, Robert D. (1971)

Professor of Speech Communication
B.A. 1954, University of Denver; M.Div. 1957, Drew University; M.A. 1968, Ph.D. 1973, University of Minnesota

Kennedy, Keith A. (1964)

Professor of Chemistry
A.B. 1961, M.A. 1964, University of Northern Colorado; Ph.D. 1974, University of Iowa

Kent, Beverly E. (1983)

Assistant Professor of Philosophy
B.A. 1967, Concordia University (Montreal); M.A. 1968, Ph.D. 1975, University of Waterloo (Ontario)

Kepner, James L. (1983)

Associate Professor of Mathematics and Statistics
B.S. 1965, M.S. 1968, Illinois State University; M.S. 1976, Ph.D. 1979, University of Iowa

Kilborn, Judith M. (1985)

Assistant Professor of English
B.A. 1974, Millikin University; M.A. 1976, Ph.D. 1985, Purdue University

Kilkelly, John C. (1966-1968, 1969)

Associate Professor of Political Science
B.A. 1961, St. Cloud State University; M.S.S. 1962, D.A. 1979, University of Mississippi

Kittel, Norman G. (1979)

Associate Professor of Criminal Justice
B.A. 1954, Middlebury College; J. D. 1957, University of Connecticut; M.A. 1965, Ph.D. 1973, Indiana University

Klein, James J. (1985)

Assistant Professor of Physics, Astronomy and Engineering Science
B.E.P. 1955, M.S. 1961, Cornell University; Ph.D. 1965, State University of New York

Klepitar, Steven F. (1983)

Associate Professor of English
B.A. 1971, M.A. 1973, State University of New York-Binghamton; Ph.D. 1977, University of Chicago

Knutson, Keith M. (1966-1967, 1970)

Professor of Biological Sciences
B.S. 1965, M.A. 1967, St. Cloud State University; Ph.D. 1970, North Dakota State University

Koyama, Steven (1981)

Associate Professor of Learning Resources Services and Center for Information Media
B.A. 1968, Johns Hopkins University; M.A. 1973, University of Maryland; Ph.D. 1981, University of Washington

Kramer, David C. (1971)

Professor of Biological Sciences
B.S. 1965, Indiana University; M.S. 1968, Ed.D. 1971, Ball State University

Krueger, David D. (1969)

Professor of Business Computer Information Systems
B.S. 1965, Wisconsin State University; M.S. 1967, Ph.D. 1969, Kansas State University

Kruse, Bruce T. (1987)

Professor of Accounting
B.A. 1951, University of Northern Iowa; M.Ed. 1952, Boston University; Ph.D. 1964, Louisiana State University

Kukuk, William D. (1968)

Associate Professor of Psychology
B.S. 1958, Carroll College; M.A. 1960, Michigan State University; Ph.D. 1967, Brigham Young University

Kurtz, Janell M. (1986)

Assistant Professor of Marketing and General Business
B.S. 1978, Pennsylvania State University; M.B.A. 1983, J.D. 1983, Memphis State University

Kurtz, Morris (1984)

Assistant Professor of Men's Athletics; Director
B.A. 1983, York University (Canada); M.S. 1975, Ph.D. 1981, Pennsylvania State University

Lacroix, Phyllis (1976-1977, 1978)

Assistant Professor of Learning Resources Services and Center for Information Media
B.A. 1963, M.S. 1966, St. Cloud State College; Ph.D. 1987, University of Minnesota

Lacroix, William J. (1966-1969, 1971)

Professor of Industrial Studies
B.S. 1963, M.S. 1967, St. Cloud State University; Ph.D. 1971, Iowa State University

Lahren, David R. (1966)

Professor of Mathematics and Statistics
B.A. 1958, Concordia College; B.D. 1963, Luther Seminary; M.S. 1966, North Dakota State University; D.A. 1971, University of Northern Colorado

Lamwers, Linda L. (1976)

Professor of Psychology
B.A. 1971, Douglass College; M.S. 1973,
Ph.D. 1976, Rutgers University

Langen, William G. (1969)

Professor of Foreign Languages and Literature;
Chairperson
B.A. 1965, Ph.D. 1976, University of Arizona

Larkin, Leo Andrew (1982)

Assistant Professor of Economics
B.S. 1967, Creighton University; M.A. 1969,
Notre Dame; M.A. 1980, Ph.D. 1982, Univer-
sity of Nebraska

Larson, James D. (1987)

Professor of Marketing and General Business
B.S. 1963, University of Wisconsin-Madison;
M.B.A. 1972, Eastern Michigan University;
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son

Lavenda, Robert H. (1979)

Associate Professor of Sociology and Anthro-
pology
A.B. 1971, Dartmouth College; M.A. 1974,
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LaVoi, Gerald W. (1979)

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orders
B.S. 1963, University of Minnesota; M.S.
1969, University of North Dakota; Ph.D.
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Layne, Richard D. (1972)

Professor of Music
B.S. 1961, Utah State University; M.M. 1964,
University of Redlands; Ph.D. 1974, Univer-
sity of Southern California

Leach, Elaine L. (1987)

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tion and Leadership; Director
B.S. 1956, Mankato State College; M.A. 1962,
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Lefferts, James L. (1985)

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Massachusetts Institute of Technology

Leitch, Vernon D. (1965)

Professor of Mathematics and Statistics
B.S. 1959, Moorhead State University; M.A.
1963, Bowling Green State University;
Ed.D. 1972, University of Northern Colo-
rado

Leone, Elizabeth A. (1986)

Assistant Professor of English
B.A. 1971, University of Iowa; M.A. 1973,
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Lere, John C. (1983)

Professor of Accounting
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University of Texas—Austin; Ph.D. 1976,
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Lesar, David J. (1967)

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B.S. 1960, M.S. 1962, St. Cloud State Univer-
sity; Ed.D. 1967, Indiana University

Lesikar, Arnold V. (1966)

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ing Science
B.A. 1958, Rice University; Ph.D. 1965, Cali-
fornia Institute of Technology

Leung, Leo K. (1968)

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Levilain, Guy (1967)

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Literature
B.A. 1956, University of Bordeaux; M.A.
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Lewis, James F. (1969)

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B.S. 1964, M.Ed. 1967, Ed.D. 1969, Univer-
sity of Nebraska

Lewis, Richard D. (1976)

Professor of History
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Lewis, Standley E. (1968)

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B.A. 1962, M.S. 1964, University of Ne-
braska—Omaha; Ph.D. 1968, Washington
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Lindstrom, Lester E. (1967)

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B.S. 1950, M.A. 1958, South Dakota State
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versity

Litterst, Judith K. (1980)

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versity of Minnesota

Little, Wayne G. (1969)

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B.A. 1954, Hamline University; B.S. 1956,
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Lofgreen, Harold A. (1972)

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B.A. 1965, Simpson College; M.A. 1967,
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Lu, Debra H. (1973)

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Lu, Ming-te (1970)

Professor of Business Computer Information
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B.S. 1960, Cheng Kung University; M.S.
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Ludeman, Vernon L. (1969)

Professor of Teacher Development
B.S. 1950, Mankato State University; M.A.
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Luksetich, William A. (1972)

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B.S. 1962, M.A. 1970, DePaul University;
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Magnus, Douglas L. (1965)

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Massmann, John C. (1963)

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McCue, John F. (1967)

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McMullen, James C. (1969)

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McWilliams, Alexander S. (1962)

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ing Science
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ticut; Ph.D. 1962, Ohio State University

Medler, Meredith A. (1968)

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sity of North Dakota

Meissner, William J. (1972)

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B.S. 1970, University of Wisconsin; M.F.A.
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Merrick, Janna C. (1977)

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person
B.A. 1970, University of Puget Sound; M.A.
1972, Ph.D. 1977, University of Washington

Merritt, Raymond (1985)

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B.A. 1968, St. Olaf College; M.A. 1963, Ph.D.
1968, University of Minnesota; B.D. 1962,
Luther Theology Seminary

Miller, Donald P. (1966)

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1962, University of Northern Iowa; Ph.D.
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Mills, Anita (1977)

Assistant Professor of Art; Chairperson
B.F.A. 1974, Texas Technical University;
M.F.A. 1977, University of Texas

Moghaddam, Masoud (1983)

Assistant Professor of Economics
B.S. 1974, National University (Iran); M.S.
1978, Ph.D. 1983, Iowa State University

Moore, Albert L. (1971)

Associate Professor of Music
B.M.Ed. 1966, Texas Tech University; M.S.
1968, University of Illinois; D.M.A. 1981,
North Texas State University

Morgan, William T. (1978)

Professor of Interdisciplinary Studies; Director,
American Studies

B.A. 1955, Macalester College; M.A. 1962,
Ph.D. 1972, University of Minnesota

Mork, David P. (1968)

Professor of Biological Sciences
B.S. 1964, Moorhead State University; M.S.
1966, Ph.D. 1969, Purdue University

Morohoshi, Yutaka (1977)

Professor of Physical Education and Recrea-
tion; Coordinator, Recreation

B.A. 1969, International Christian Univer-
sity; M.R.Ed. 1971, Brigham Young Univer-
sity; Ph.D. 1976, University of Utah

Mortrude, Gordon E. (1960-1964, 1965)

Professor of Teacher Development
B.S. 1957, Moorhead State University; M.S.
1959, St. Cloud State University; Ed.D. 1969,
University of North Dakota

Mortrude, Lowell A. (1961-1962, 1963)

Professor of Teacher Development
B.A. 1953, B.S. 1957, St. Cloud State Univer-
sity; M.Ed. 1960, Ed.D. 1969, University of
North Dakota

Mudd, Steven E. (1981)

Assistant Professor of Speech Communication
B.A. 1972, Macalester College; M.A. 1974,
Ph.D. 1978, University of Minnesota

Munson, Thomas O. (1987)

Associate Professor of Chemistry
B.A. 1963, University of California-Berkeley;
M.S. 1965, Ph.D. 1968, University of Wis-
consin-Madison

Murphy, John E. (1980)

Assistant Professor of Sociology and Anthro-
pology; Chairperson
B.A. 1968, M.A. 1971, Western Illinois Uni-
versity; Ph.D. 1979, Southern Illinois Uni-
versity

Murphy, Robert J. (1969)

Professor of Psychology; Director, Research
and Evaluation
B.S. 1964, Fordham University; Ph.D. 1970,
University of Tennessee

Nayenga, Peter F. (1978)

Professor of History
B.A. 1968, University of East Africa; M.A.
1969, Ph.D. 1976, University of Michigan

Nearing, Ruth J. (1970)

Associate Professor of Physical Education and
Recreation
B.S. 1963, M.Ed. 1970, East Stroudsburg
State College; Ph.D. 1985, Texas Woman's
University

Nelson, Charles L. (1975)

Professor of Earth Sciences
B.A. 1968, Gustavus Adolphus College; M.S.
1973, Ph.D. 1974, University of Chicago

Nelson, J. Michael (1972)

Professor of Learning Resources Services and
Center for Information Media
B.S. 1963, M.S. 1966, Ed.D. 1972, East Texas
State University

Nestel, Gerald E. (1969)

Professor of Industrial Studies
B.S. 1962, University of Wisconsin-Stout;
M.S. 1963, Southern Illinois University;
Ed.D. 1970, University of Arkansas

Nickles, William C. (1966)

Professor of Chemistry
B.Ch.E. 1954, University of Minnesota; M.S.
1962, University of Wisconsin; Ph.D. 1966,
North Dakota State University

Nunes, Dennis L. (1975)

Associate Dean, Graduate Studies; Director of
Summer School; Associate Professor of Psy-
chology
B.A. 1968, Linfield College; M.R.E. 1970,
North American Baptist Seminary; Ph.D.
1976, Utah State University

Osendorf, Frank P. (1967)

Professor of Health Education and Traffic
Safety
B.S. 1963, M.S. 1966, St. Cloud State Univer-
sity; H.S.D. 1973, Indiana University

Overy, David H. (1970)

Professor of History
A.B. 1955, Knox College; M.S. 1960, Ph.D.
1967, University of Wisconsin

Pagel, Larry (1986)

Assistant Professor of Business Education and Office Administration
B.A. 1970, M.A. 1975, Ph.D. 1986, University of North Dakota

Palm, Glenn F. (1983)

Assistant Professor of Child and Family Studies
B.S. 1971, Loyola University; M.A. 1975, Ph.D. 1981, University of Minnesota

Palmer, John W. (1976)

Associate Professor of Health Education and Traffic Safety; Chairperson
B.S. 1970, Illinois State University; M.S. 1974, College of Racine; Specialist 1978, St. Cloud State University; Ph.D. 1981, University of Minnesota

Parham, Judy F. (1983)

Assistant Professor of English; Coordinator, Division of General Studies
B.A. 1968, Lynchburg College; M.A. 1969, University of Virginia; Ph.D. 1983, University of Denver

Parham, Sidney F. (1979)

Associate Professor of English
B.A. 1966, Washington-Lee University; M.A. 1969, University of Virginia; Ph.D. 1975, Tufts University

Peck, John H. (1968)

Professor of Biological Sciences; Director of Environmental Studies
B.A. 1964, Clark University; Ph.D. 1968, University of California—Berkeley

Perrier, Ronald G. (1975)

Professor of Theatre
B.S. 1962, University of Wisconsin—River Falls; M.A. 1968, Ph.D. 1972, University of Minnesota

Perry, Constance M. (1985)

Assistant Professor of English
B.A. 1977, College of St. Catherine; M.A. 1980, Ph.D. 1982, Indiana University

Peterson, Dale W. (1966)

Associate Professor of History; Director, Latin American Studies
B.A. 1953, Macalester College; M.A. 1961, Ph.D. 1969, University of Minnesota

Peterson, Donald G. (1965)

Professor of Biological Sciences
B.S. 1946, M.A. 1949, Ph.D. 1968, University of Minnesota

Peterson, Terrance L. (1976)

Professor of Psychology
B.S. 1965, University of Wisconsin—Eau Claire; M.S. 1968, Ph.D. 1970, University of Wisconsin

Petrangelo, George J. (1976)

Associate Professor of Psychology
B.S. 1969, University of Wisconsin—River Falls; M.S. 1973, M.S. 1974, University of Wisconsin—Stout; Ed.D. 1976, University of Northern Colorado

Pfleger, Lawrence R. (1979)

Associate Professor of Counseling and Related Services
B.S. 1967, M.A. 1969, Ph.D. 1977, University of Wisconsin

Phillips, Alan M. (1966)

Professor Philosophy
A.B. 1956, Knox College; M.A. 1961, Ph.D. 1969, Michigan State University

Pluth, Edward J. (1966)

Associate Professor of History; Chairperson
B.S. 1959, M.S. 1963, St. Cloud State University; Ph.D. 1970, Ball State University

Porter, Laurinda W. (1984)

Assistant Professor of Speech Communication
B.S. 1968, Northwestern University; M.A. 1971, Ph.D. 1981, University of Minnesota

Pou, Carol R. (1969)

Associate Professor of Biological Sciences
B.A. 1964, Viterbo College; M.S. 1966, Ph.D. 1969, The Catholic University of America

Pou, Wendell M. (1966)

Professor of Physics, Astronomy and Engineering Science
B.S. 1959, Millsaps College; M.S. 1962, Ph.D. 1969, Vanderbilt University

Powers, Gerald L. (1974)

Professor of Communication Disorders; Chairperson
B.S. 1963, St. Cloud State University; M.A. 1969, Ph.D. 1971, University of Minnesota

Preble, Jana (1986)

Assistant Professor of Psychology
B.A. 1963, Grinnell College; M.C.S. 1981, Creighton University; M.A. 1984, Ed.D. 1986, University of Nevada—Reno

Present, Richard D. (1976)

Associate Professor of Sociology and Anthropology
B.A. 1967, MacMurray College; M.S.W. 1969, State University of New York; Ph.D. 1981, University of Minnesota

Prochnow, Robert R. (1972)

Professor of Psychology
B.A. 1960, North Central College; M.A. 1967, University of Wisconsin; Ph.D. 1972, University of Texas

Prout, Robert S. (1972)

Professor; Chairperson, Criminal Justice
B.A. 1969, Muskingum College; LL.B. 1967,
LaSalle Extension University; M.Ed. 1970,
Ohio University; Ph.D. 1972, Ohio State
University

Purdum, Boyd A. (1968)

Professor of Teacher Development
B.A. 1959, M.A. 1961, University of Ken-
tucky; Ed.D. 1968, George Peabody College
for Teachers

Putbrese, Larry M. (1978)

Professor of Teacher Development
B.A. 1959, Buena Vista College; M.A. 1963,
Northeast Missouri State College; Ed.D.
1971, University of South Dakota

Rauch, Margaret M. (1974)

Associate Professor of Counseling and Related
Services
B.S. 1961, M.S. 1967, St. Cloud State Univer-
sity; Ph.D. 1980, University of Minnesota

Redd, Kathleen M. (1974)

Professor of Interdisciplinary Studies
A.B. 1966, M.A. 1970, Ph.D. 1974, University
of Alabama

Redding, Arthur J. (1968)

Professor of Psychology
B.S. 1959, Mankato State University; M.A.
1962, University of Northern Colorado;
Ed.D. 1968, University of North Dakota

Reese, Frederick D. (1976)

Associate Professor of Special Education
B.A. 1953, Ohio Wesleyan University; B.S.
1957, M.A. 1960, Ph.D. 1966, Ohio State
University

Reese, Sandra C. (1976)

Professor of Special Education; Chairperson
B.A. 1964, Ohio Wesleyan University; M.A.
1965, Ph.D. 1967, Ohio State University

Renn, Dory (1973)

Associate Professor of Psychology
B.A. 1968, University of Louisville; M.A.
1971, Ph.D. 1976, State University of New
York

Richason, Benjamin F. (1978)

Associate Professor of Geography
B.S. 1970, Carroll College; M.A.T. 1972,
Oregon College of Education; Ph.D. 1978,
Michigan State University

Risberg, Douglas F. (1972)

Professor; Human Relations and Multicultural
Education
B.S. 1960, Illinois State University; M.A.
1964, Northern Illinois University; Ph.D.
1972, University of Wisconsin

Risk, Harold F. (1979)

Associate Professor of Health Education and
Traffic Safety
B.S. 1974, M.S. 1975, Indiana State Univer-
sity; Ph.D. 1982, Southern Illinois Univer-
sity—Carbondale

Robertson, Kent A. (1983)

Assistant Professor of Interdisciplinary Studies;
Director, Local and Urban Affairs
B.A. 1975; Wake Forest University; M.C.P.
1977, University of Cincinnati; Ph.D. 1981,
University of Delaware

Robinson, David H. (1985)

Associate Professor of Mathematics and Statis-
tics
B.S. 1975, Henderson State University; M.S.
1976, Ph.D. 1979, University of Iowa

Robinson, Lora H. (1979)

Associate Professor of Business Computer
Information Systems
B.A. 1963, M.A. 1964, University of Iowa;
Ph.D. 1972, University of California—Los
Angeles

Rodgers, William C. (1979)

Professor of Marketing and General Business
B.A. 1964, St. Ambrose College; M.B.A.
1966, San Jose City College; Ph.D. 1977,
University of Iowa

Romanish, Bruce A. (1982)

Associate Professor of Teacher Development
B.S. 1971, Mansfield State College; M.Ed.
1975, Kutztown State College; Ed.D. 1980,
Penn State University

Roney, Lois Y. (1987)

Assistant Professor of English
B.A. 1961, Stanford University; M.A. 1965,
University of Chicago; Ph.D. 1978, Univer-
sity of Wisconsin-Madison

Roser, Sherman R. (1979)

Associate Professor of Accounting
B.A. 1961, Ursinus College; M.B.A. 1973,
Old Dominion University; Ph.D. 1979, Uni-
versity of Nebraska

Ross, Roseanna G. (1980)

Assistant Professor of Speech Communication
B.S. 1971, M.A. 1972, Ohio State University;
Ph.D. 1982, Ohio University

Rouch, Roger L. (1967)

Professor of Teacher Development
B.S. 1957, Indiana Central College; M.S.
1961, Butler University; Ed.D. 1967, Ball
State University

Rowland, H. Ray (1959)

Professor of Mass Communications; Special Assistant to Dean of Fine Arts and Humanities
B.J. 1950, University of Missouri; M.S. 1959, Southern Illinois University; Ph.D. 1969, Michigan State University

Roy, James P. (1964)

Professor of Art
B.A. 1952, Concordia College; M.A. 1957, University of Iowa; Ed.D. 1961, Pennsylvania State University

Royalty, Kent W. (1983)

Associate Professor of Marketing and General Business
B.B. 1976, Eastern Kentucky University; J.D. 1979, University of Kentucky-Lexington

Rudrud, Eric H. (1982)

Associate Professor of Psychology
B.S. 1972, Colorado State University; M.S. 1974, Ph.D. 1978, Utah State University

Ryan, Robert D. (1962)

Professor of Technology and Industrial Engineering
B.A. 1955, Wayne State University; M.A. 1957, Ed.D. 1964, University of Northern Colorado

Rydberg, David G. (1966)

Professor of Learning Resources Services and Center for Information Media
B.S. 1963, M.S. 1965, St. Cloud State University; M.A. 1971, University of Minnesota; Ed.D. 1974, University of Arizona

Saeed, Mohammed (1985)

Associate Professor of Computer Science
M.S. 1982, Ph.D. 1985, University of Nebraska

Samarra, Alauddin I. (1968)

Professor of History
B.A. 1956, M.S. 1959, Ph.D. 1966, University of Wisconsin

Samuel, Patricia (1981)

Assistant Professor; Director, Women's Studies
B.A. 1963, Shilmer College; Diploma in Education 1964, Makerere University College, Kampala, Uganda; J.D. 1969, University of Pennsylvania

Savage, Carl C. (1968)

Professor of Learning Resources Services and Center for Information Media
B.A. 1957, Belmont College; M.R.E. 1959, Ed.D. 1966, New Orleans Baptist Seminary

Schalow, David L. (1985)

Associate Professor of Management and Finance
B.B.A. 1976, M.B.A. 1978, University of Wisconsin; Ph.D. 1984, University of Arkansas

Schmidt, Orville H. (1967)

Professor of Political Science
B.A. 1956, University of Minnesota; M.A. 1962, George Washington University; Ph.D. 1967, University of West Virginia

Schmidt, Russell H. (1969)

Professor of Teacher Development
B.S. 1955, Winona State University; M.S.E.E. 1965, University of Minnesota; Ed.D. 1968, University of Florida

Schneider, Kenneth C. (1974)

Professor of Marketing and General Business
B.A. 1970, M.S. 1972, Ph.D. 1975, University of Minnesota

Schoenberger, Richard J. (1986)

Associate Professor of Physics, Astronomy and Engineering Science
B.S. 1964, St. Procopius College; Ph.D. 1971, Iowa State University

Schrader, Shirley L. (1967)

Professor of Music
B.A. 1952, B.Mus. 1952, University of Northern Colorado; M.A. 1956, University of Denver; Ph.D. 1968, University of Michigan

Schrank, Gordon D. (1981)

Associate Professor of Biological Sciences
B.S. 1970, Angelo State University, Ph.D. 1974, University of Texas—Medical Branch

Schreiber, Francis B. (1979)

Professor of Criminal Justice
B.A. 1971, Hope College; M.A. 1974, Ph.D. 1977, University of Colorado

Schwaller, Anthony E. (1978)

Professor of Industrial Studies; Chairperson
B.S. 1967, M.S. 1968, University of Wisconsin—Stout; Ph.D. 1976, Indiana State University

Schweiger, Bradley J. (1976)

Professor of Accounting
B.A. 1957, Mankato State University; M.B.A. 1960, D.B.A. 1970, Indiana University

Schwerdtfeger, Dale W. (1971)

Associate Professor of Sociology and Anthropology
B.A. 1966, McKendree College; M.A. 1972, Ph.D. 1981, Southern Illinois University

Sebastian, Richard (1983)

Associate Professor of Management and Finance
B.A. 1970, Lewis College; M.A. 1972, Ph.D. 1974, University of Wisconsin-Madison

Shenk, Dena (1979)

Associate Professor of Interdisciplinary Studies; Chairperson
B.A. 1973, State University of New York at Stony Brook; M.A. 1976, Ph.D. 1979, University of Massachusetts

Sherarts, Theodore R. (1966)

Professor of Art
B.Ph. 1964, University of North Dakota; M.F.A. 1966, California College of Arts and Crafts

Sherohman, James L. (1978)

Associate Professor of Sociology and Anthropology
B.A. 1968, University of Minnesota; M.A. 1971, Ph.D. 1977, Southern Illinois University

Shurr, George W. (1967)

Professor of Earth Sciences; Chairperson
B.A. 1965, University of South Dakota; M.S. 1967, Northwestern University; Ph.D. 1975, University of Montana

Sikkink, Donald E. (1963)

Professor of Speech Communication; Dean, College of Fine Arts and Humanities
B.A. 1949, M.A. 1951, Ph.D. 1954, University of Minnesota

Simpson, Eleanor E. (1969)

Professor of Interdisciplinary Studies
B.A. 1960, Park College; M.A. 1964, San Francisco State University; Ph.D. 1974, University of Minnesota

Skalbeck, Bruce A. (1968-1971, 1977)

Associate Professor of Management and Finance
B.A. 1965, Mankato State University; M.B.A. 1967, University of Denver; Ph.D. 1975, University of Northern Colorado

Smelser, Lawrence B. (1969)

Professor of Learning Resources Services and Center for Information Media
B.S. 1955, Southwest Missouri State University; M.A. 1962, Washington University; Ed.D. 1969, University of Oklahoma

Song, Jae H. (1978)

Associate Professor of Business Computer Information Systems
B.S. 1964, Seoul National University; M.S. 1970, London University; M.B.A. 1974, Ph.D. 1978, University of Minnesota

Soroka, Leonard G. (1975-1976, 1977)

Professor of Earth Sciences
B.S. 1971, Temple University; M.Ed. 1972, West Chester State College; D.Ed. 1977, Pennsylvania State University

Speers, Susan D. (1979)

Associate Professor of Theatre
B.A. 1972, M.A. 1973, University of Houston; Ph.D. 1982, University of California—Santa Barbara

Sprague, David S. (1969)

Professor; Vice President for Student Life and Development
B.S. 1960, Dakota State College; M.Ed. 1963, South Dakota State University; Ed.D. 1969, University of South Dakota

Stadum, Beverly A. (1984)

Assistant Professor of Social Work
B.A. 1968, Augsburg College; M.S.W. 1973, Ohio State University; Ph.D. 1987, University of Minnesota

Stinson, L. Marilyn (1975)

Professor of Business Education and Office Administration; Chairperson
B.A. 1963, California State University—Sacramento; M.A. 1966, Ph.D. 1975, University of North Dakota

Stocker, Glenn M. (1978)

Professor of Speech Communication
B.S. 1963, Winona State University; M.A. 1967, University of North Dakota; Ph.D. 1975, Wayne State University

Summers, Marcia A. (1969)

Professor of English; Coordinator, Graduate Programs in English
B.A. 1961, Geneva College; M.A. 1962, Ph.D. 1969, University of Illinois

Sundby, Lawrence C. (1967-1971, 1975)

Professor of Accounting; Chairperson
B.A. 1963, M.B.A. 1967, St. Cloud State University; Ph.D. 1975, University of Nebraska

Tallent, Dwaine R. (1979)

Professor of Management and Finance; Director, Research, Development and Community Service, College of Business
B.A. 1957, College of Emporia; M.S. 1964, Kansas State University; Ph.D. 1970, University of Nebraska

Thomas, David J. (1980)

Associate Professor of Management and Finance
B.S. 1949, J.D. 1952, M.A. 1958, Ph.D. 1979, University of Nebraska—Lincoln

Torrence, Judith L. (1976)

Professor of Biological Sciences; Coordinator, Medical Technology
B.S. 1964, University of Wisconsin; Ph.D. 1971, University of Minnesota

Tosh, L. Wayne (1969)

Professor of English
B.A. 1955, M.A. 1957, Ph.D. 1962, University of Texas

Troyer, Beverly J. (1967)

Professor of Physical Education and Recreation
B.S. 1961, M.A. 1964, Ph.D. 1971, University of Minnesota

Trummel, Donald R. (1960-1967, 1969)

Professor of Physics, Astronomy and Engineering Science
B.S. 1955, M.S. 1956, Western Illinois University; Ph.D. 1974, Southern Illinois University

Vadnie, Michael (1981)

Associate Professor of Mass Communications
B.A. 1970, College of St. Thomas; J.D. 1981, University of North Dakota

Van Akin, Everett F. (1968)

Professor of Mathematics and Statistics
B.A. 1955, M.A. 1959, State University of New York; Ph.D. 1972, University of Minnesota

Van Pelt, Elizabeth S. (1963)

Professor of English
B.A. 1943, M.A. 1952, Ph.D. 1962, University of Illinois

Vaughter, Paul H. (1962)

Associate Professor of History
B.A. 1959, M.A. 1960, University of Tulsa; Ph.D. 1970, University of Kentucky

Vick, Charles F. (1971)

Professor of Speech Communication; Chairperson
B.A. 1963, Ph.D. 1967, University of Denver

Vora, Erika (1978)

Associate Professor of Speech Communication
M.A. 1972, M.S. 1973, University of Bridgeport; Ph.D. 1978, State University of New York—Buffalo

Vora, Jay A. (1978)

Professor of Management and Finance
M.E. 1965, City College of New York; M.S. 1961, Ph.D. 1969, Rensselaer Polytechnic Institute

Walter, Robert J. (1986)

Associate Professor of Marketing and General Business
B.B.A. 1970, J.D. 1974, University of Kentucky

Watkins, Ivan W. (1963)

Professor of Earth Sciences
B.S. 1955, M.S. 1957, University of Kansas; Ph.D. 1958, Texas A & M University

Waxlax, Robert G. (1970)

Professor of Physical Education and Recreation
B.S. 1958, St. Cloud State University; M.S. 1960, Central Missouri State College; Ph.D. 1972, University of Minnesota

Weber, Stephen L. (1984)

Vice President for Academic Affairs
B.A. 1964, Bowling Green State University; Ph.D. 1969, University of Notre Dame

Weiskopf, Edward A. (1979)

Professor of Chemistry
B.A. 1959, Albion College; Ph.D. 1963, Iowa State University

Weitenbeck, Anthony J. (1984)

Assistant Professor of Physics, Astronomy and Engineering Science
B.A. 1968, University of Wisconsin—Oshkosh; M.A. 1971, Marquette University; Ph.D. 1976, Case-Western Reserve University

Wellik, Jerry J. (1972-1973, 1974)

Associate Professor of Special Education
B.S. 1967, University of Iowa; M.S. 1972, St. Cloud State University; Ph.D. 1979, University of North Dakota

Wells, Wayne F. (1983)

Associate Professor of Marketing and General Business
B.A. 1970, California State University—Sacramento; J.D. 1977, LL.M. 1981, University of the Pacific, McGeorge School of Law

White, James E. (1964)

Professor of Philosophy
A.B. 1961, Dartmouth College; M.A. 1963, Ph.D. 1968, University of Colorado

White, Michael D. (1978)

Associate Professor of Economics; Chairperson
B.A. 1972, Ph.D. 1978, Texas Tech University

Whitlock, Delores C. (1969)

Professor of Physical Education and Recreation
B.S. 1954, Mankato State University; M.S. 1957, State University of Iowa; Ed.D. 1969, University of New Mexico

Wilhite, Carmen I. (1974)

Professor of Music
B.M. 1965, M.Mus. 1968, Eastman School of Music; D.M.A. 1977, North Texas State University

Williams, Dale A. (1987)

Assistant Dean, College of Science and Technology
B.A. 1961, Taylor University; M.S. 1972, Ph.D. 1973, Wayne State University

Williams, Steven F. (1974)

Professor of Biological Science
B.S. 1966, University of Washington; M.A. 1968, University of California—Los Angeles; Ph.D. 1974, Oregon State University

Williams, Stephen L. (1986)

Assistant Professor of Special Education
B.S.E. 1972, M.S.E. 1975, Kansas University; Ph.D. 1986, University of Oregon

Williamson, Homer E. (1973)

Professor of Political Science; Coordinator, Public Administration
B.A. 1962, Carleton College; M.A. 1963, Northwestern University; Ph.D. 1971, University of Minnesota

Wixon, Lewis G. (1966)

Professor of Geography
B.A. 1963, University of Michigan; M.S. 1969, Ph.D. 1978, Indiana State University

Wolfer, Alton C. (1968)

Associate Professor of Interdisciplinary Studies
B.S. 1964, North Dakota State University; M.S. 1968, Utah State University; D.A. 1979, University of North Dakota

Yen, Matthew M. (1986)

Associate Professor of Technology and Industrial Engineering
B.S. 1973, Taiwan University (Taiwan); M.S. 1975, University of Idaho; Ph.D. 1979, Purdue University

Yoos, George E. (1962)

Professor of Philosophy
B.A. 1948, M.A. 1950, Ph.D. 1971, University of Missouri

Young, Joseph M. (1976)

Associate Professor of English
B.A. 1970, M.A. 1972, California State University—Sacramento; M.A. 1975, University of Southern California; M.A. 1978, Goethe Institute; D.A. 1980, Drake University

UNIVERSITY SERVICES

ACADEMIC AFFAIRS

Academic Computer Services

The primary academic requirements are served by a VAX-11/780 and the Univac 1100/80. The Academic Computer Service is located in the Engineering and Computing Center Building.

Center for Economic Education

The Center provides an inter-school program that has a general objective: the improvement of undergraduate and graduate economic education programs at the elementary, secondary and college levels of instruction. The Center initiates research projects, participates in the planning of new academic programs and provides resource assistance to elementary and secondary schools in Central Minnesota. This office conducts special adult education courses and offers symposiums and in-service workshops in economic education for teachers and curriculum supervisors. The Center emphasizes the development and distribution of economics curricular materials for classroom use and provides assistance to outside professional groups and institutions concerned with economic education.

In cooperation with the Department of Economics and Interdisciplinary Studies, the Center offers a Master of Science degree in Social Science (Economic Education). This office conducts National Science Foundation, U.S. Office of Education and private foundation supported curriculum and research programs in economic education. The Center administers the National Depository of Children's Stories in Economics.

Extension and Continuing Education

Extension classes held in off-campus centers and continuing education classes held on the campus for the community are a part of the educational services to people in the St. Cloud State University service area. Regular courses and specially designed workshops, on both undergraduate and graduate levels, are offered to meet the needs of various community groups, including those in education, industry, business, and the general community. This is an all-college program under the coordination of the School of Graduate and Continuing Studies.

The Center for Continuing Studies at St. Cloud State University has as its main purpose the development of educational programs and services for non-traditional students. As related to the broad goals and mission of the university, the Center provides leadership in meeting educational needs that relate to: mid-career changes; the worthy use of increased leisure hours; the need to find work in a changing job market; re-certification or re-training needs; and the exploration of new interests. In attempting to meet these needs the staff of the Center is responsible for the development, coordination and implementation of the following programs: community education and extension, external studies, evening programming, radio and television as alternative delivery systems, educational conferences and non-credit offerings.

The major functions of the Center for Continuing Studies are to:

1. provide leadership and coordinate programs of continuing studies with other academic and administrative units.
2. cooperate with business, industry and other professions, groups and individuals in providing credit and non-credit courses.
3. provide leadership for the development and coordination of programs of study focusing upon the needs of non-traditional students.
4. develop and sponsor educational lectures and conferences.
5. coordinate the policy for non-credit programs.

Institutional Studies. This office conducts studies to support administrative decisions, processes educational and governmental questionnaires, advises faculty in research activities and initiates research projects.

Learning Resources Services

Centennial Hall, the Learning Resources Center for St. Cloud State University, serves all disciplines of the university. It is located as a focal point in the approximate geographic center of the campus.

The Learning Resources Center includes all print and non-print materials (and attendant hardware) for the academic community. This collection includes approximately one and one-half million items. Seating in the reading areas and study carrels accommodates two thousand. It contains 495,000 cataloged books, 112,000 paper copies of federal documents, 620,000 units of microform (including total Educational Resources Information Center ERIC1), 83,000 microbook units, 48,000 maps, 22,000 audio items (records and tapes), slide sets, transparency sets, video tapes and approximately 2,000 magazines and newspapers. In addition to the resources in this collection, St. Cloud State University has access to the MINITEX network systems of Minnesota which provides access to all major collections in Minnesota as well as those in North Dakota, South Dakota, and Wisconsin.

ADMINISTRATIVE AFFAIRS

Administrative Computer Services. The Computer Center provides administrative services. A UNIVAC 1100/81 located at St. Cloud serves the administrative data processing needs of the entire state university system.

Buildings and Grounds Maintenance. This office assumes responsibility for the care, maintenance and operation of university-owned equipment and facilities. Also under the jurisdiction of Buildings and Grounds Maintenance are the custodial and maintenance operations, security, parking and the motor pool.

Printing Services. A central duplicating, photocopy and printing facility for university-related materials is provided by this office.

UNIVERSITY RELATIONS

Admissions. St. Cloud State University is represented at University Day/Night programs and individual high school and community college visits by members of this office. It provides specific admission, financial aid, and program information to college-bound students and their high school counselors. Tours are provided for campus visitors.

Alumni Services. The Alumni Office maintains a file of graduates and serves as the liaison between the alumnus and the university. It keeps the alumnus informed about the university and his/her classmates. It provides opportunities for alumni to keep in touch with their university acquaintances through activities on and off campus.

Career Planning and Placement. The function of this office is to assist the undergraduates in developing their career plans and relating these plans to the employment market. Once the degree has or is about to be obtained, the office assists both current graduates and alumni in their search for suitable positions. The primary services include the assembling of a set of placement credentials, distribution of job opportunity lists, forwarding of credentials to prospective employers, coordinating on-campus interviews, maintaining a career library, providing statistical information, and advising students regarding career opportunities and employment techniques.

Development Office. The purpose of the Development office is to direct and expand the overall development (fund raising) program of the University. Methods used to obtain financial support include personal contact, direct mail campaigns and telephone solicitation. Funds raised are used for current operations, endowment and capital improvement. The Development Office coordinates the work of volunteers, including faculty, staff, students, alumni and community leaders. The University Foundation, a non-profit, tax-exempt organization, receives, invests and disburses funds raised through the Development office.

Public Relations and Publications. This office disseminates information of general interest about the university to various publics served by the institution. It provides the mass media with university news and photographs and prepares and coordinates all official university publications.

BUILDINGS AND GROUNDS



The date after each building indicates when the building was completed and occupied.

Classroom Buildings

Brown Hall (1959). Classrooms and faculty offices. Named for Joseph C. Brown, president, 1916-1927.

Business Building (1968). College of Busi-

ness classrooms and offices, together with the Center for Economic Education and Office of Research, Development, and Community Service.

Eastman Hall (1929). Facilities for physical education and recreation, including a swimming pool and gymnasium. Named for Alvah Eastman, former member of the State University Board.

Education Building (1971). Facilities for secondary, elementary and special education together with psychology, communication disorders, guidance and counseling and student teaching are located in this building.

Engineering and Computing Center (1958, 1962). Classrooms, child care center, laboratories, and faculty offices for engineering program and facilities for academic computing. (Formerly the Gray Campus Laboratory School, named for Thomas J. Gray, president, 1881-1890.)

Halenbeck Hall (1965, 1980). Health, physical education and recreation building with a main gym seating 7,500, a swimming pool, diving pool, two small gyms, 200 meter track, racquetball courts, wrestling room, weight room and dance studio.

Headley Hall (1962). College of Science and Technology building with shops, laboratories, classrooms and offices plus a lecture auditorium seating 150. Named for John W. Headley, president, 1947-1951.

Kiehle Visual Arts Center (1952, 1974). Former library, remodeled for use by the Art Department. Named for David L. Kiehle, president, 1875-1881.

Mathematics and Science Center (1973). This four-story structure includes, in addition to classrooms and laboratories, a planetarium, museum, greenhouse, observatory, aquarium, computer-calculator room and high energy linear accelerator for nuclear research. It is connected to Brown Hall by an enclosed elevated walkway.

Performing Arts Center (1968). Music, speech and theatre classrooms and offices, with a main theatre seating 485, a studio theatre/recital hall seating 300, rehearsal hall, private practice studios and television studio.

Riverview Building (1911). English Department classrooms and offices and foreign language laboratories.

Stewart Hall (1948, 1978). Classrooms, offices, bookstore and an auditorium seating 1,200. Named for Warren H. Stewart, State University Board member, 1938-1948.

Service Buildings

Administrative Services Building (1975). Offices for the president, administrative affairs, academic affairs, university relations and part of student life and development. Located at the west entrance to the campus.

Alumni House (1973). Former private residence, acquired by the university in 1973. The facilities are used to provide services for alumni and retired faculty.

Atwood Memorial Center (1966, 1972). Houses dining and recreation facilities and meeting rooms for students and faculty. Named for the Clarence L. Atwood family.

Carol Hall (1946). Originally a private home, then a women's residence hall, now an office building. Named for Carol Selke, wife of President George A. Selke.

Centennial Hall (1971). Houses the Learning Resources Center which includes all materials and services usually found in the library and audiovisual services; a remote access information system; classrooms and laboratories for the Center for Information Media; and Administrative Computer Services. Ground was broken during the university's centennial year, 1969.

Garvey Commons (1962, 1965). Two dining rooms with cafeteria service seating 500 at one time. Named for Beth Porter Garvey, first dean of women.

Lawrence Hall (1905). Faculty office building. Oldest structure on campus. Named for Isabel Lawrence, president, 1915-1916.

Maintenance Building I (1964). Attached to the heating plant.

Maintenance Building II (1980). Contains maintenance office. These buildings provide shops, warehouse and vehicle storage for the campus.

Whitney House (1956). Former residence now used for offices. A gift to the university from the heirs of A. G. Whitney.

Residence Halls

Benton Hall (1967, 1968). Apartment-type residence for men and women. 285 beds. Named for Benton County.

Case Hall (1964). Men's residence hall with 190 beds. Named for Marie E. Case, former faculty member.

Hill Hall (1962). Women's residence hall with 150 beds. Named for Helen Hill, former faculty member.

Holes Hall (1965). First high-rise with nine stories, housing 399 men and women. Named for W. W. Holes, former member of the State University Board.

Mitchell Hall (1957, 1959). Women's residence hall with 418 beds. Named for W. B. Mitchell, former resident director.

Sherburne Hall (1969). Tallest building on campus, housing 504 men and women. Named for Sherburne County.

Shoemaker Hall (1915, 1960). Capacity for 505 students. Named for Waite A. Shoemaker, president, 1902-1916.

Stearns Hall (1966). Companion building to Holes Hall housing 399 men and women. Named for Stearns County.

George W. Friedrich Park. This 50-acre tract one mile east of campus contains granite quarry ponds and extensive pine plantings used for nature study and recreation. Named for George W. Friedrich, former faculty member.

Minnesota Highway Safety Center. Designed by the Minnesota Department of Highways, this facility is used to teach emergency driving techniques and for vehicle testing and research. It is located on a portion of 655 acres of unimproved state land placed in the custody of the university in 1970. The remainder of the property, adjoining Highway 10 east of the St. Cloud Reformatory, is used by the university for environmental studies.

Selke Field. Varsity athletic field containing a baseball diamond, cinder track and football field, enclosed by a granite wall. Named for George A. Selke, president, 1927-1943.

Talahi Woods. This upper river terrace area is being preserved as an oak savannah and is to be retained in its natural condition for biological study.

OTHER PROPERTIES

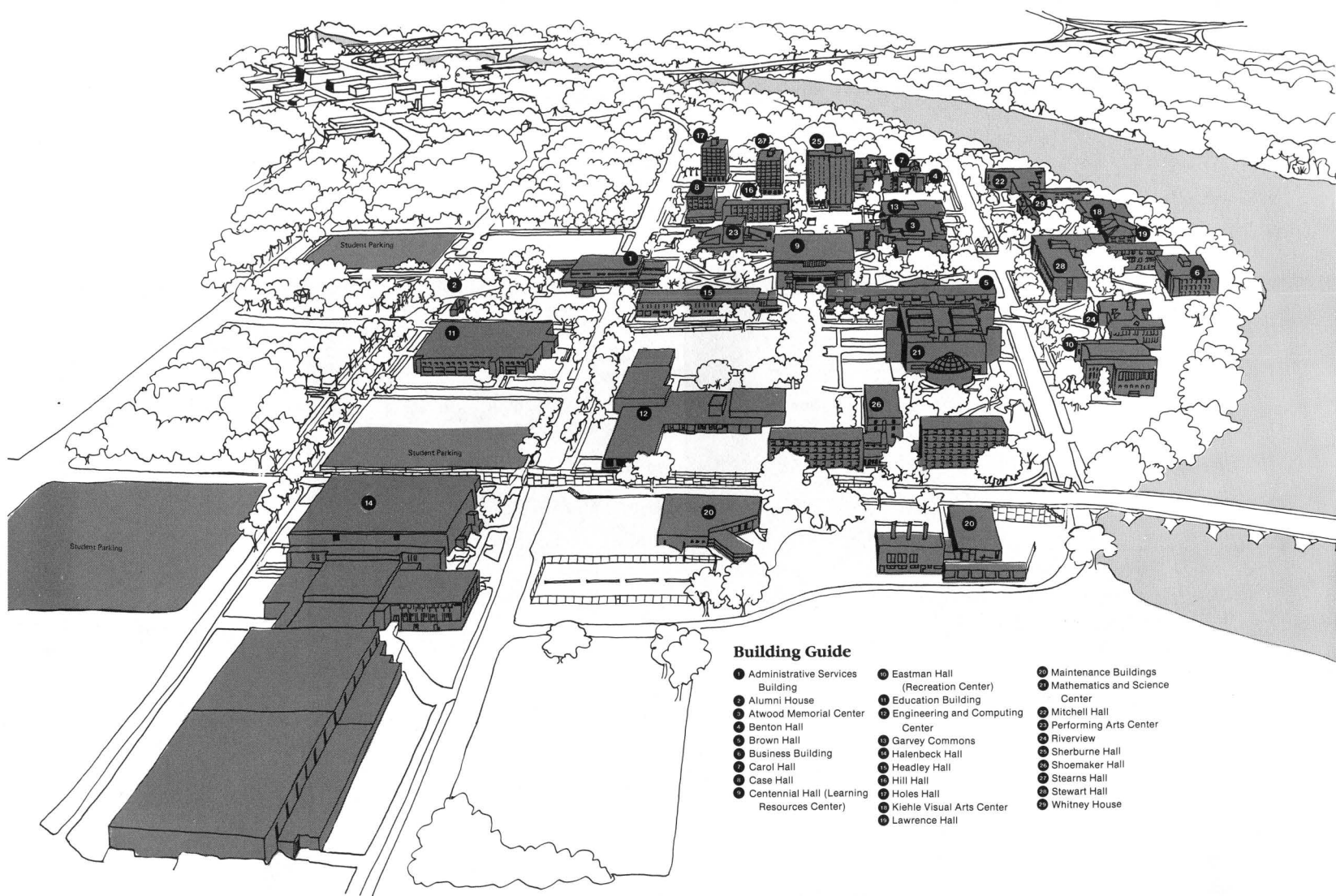
Beaver Islands. A group of islands in the Mississippi River one-half mile south of the campus used for the study of plant and animal life. Named by Zebulon Pike, who explored the area in 1805.

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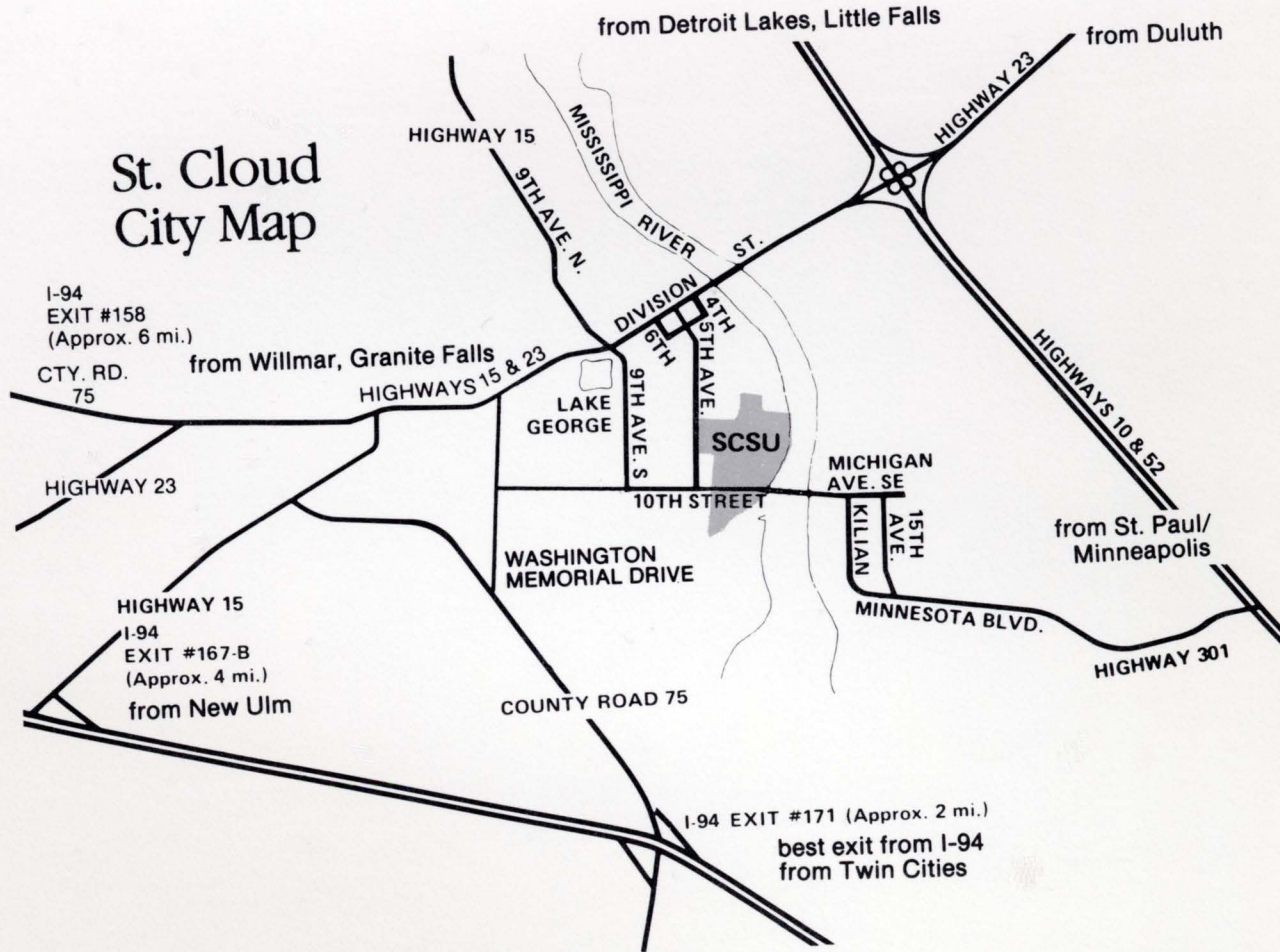
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Building Guide

- | | | |
|---|------------------------------------|----------------------------------|
| ① Administrative Services Building | ⑭ Eastman Hall (Recreation Center) | ⑳ Maintenance Buildings |
| ② Alumni House | ⑮ Education Building | ㉑ Mathematics and Science Center |
| ③ Atwood Memorial Center | ⑯ Engineering and Computing Center | ㉒ Mitchell Hall |
| ④ Benton Hall | ⑰ Garvey Commons | ㉓ Performing Arts Center |
| ⑤ Brown Hall | ⑱ Halenbeck Hall | ㉔ Riverview |
| ⑥ Business Building | ⑲ Headley Hall | ㉕ Sherburne Hall |
| ⑦ Carol Hall | ㉚ Hill Hall | ㉖ Shoemaker Hall |
| ⑧ Case Hall | ㉛ Holes Hall | ㉗ Stearns Hall |
| ⑨ Centennial Hall (Learning Resources Center) | ㉜ Kiehle Visual Arts Center | ㉘ Stewart Hall |
| | ㉝ Lawrence Hall | ㉙ Whitney House |

St. Cloud City Map



School of Graduate and Continuing Studies



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